DOCUMENT RESUME

ED 037 583 VT 010 768

AUTHOR	Jelden, David L., Ed.
TITLE	Summaries of Studies in Industrial Arts, Trade and Industrial, and Technical Education From 1930-.
INSTITUTION	American Council on Industrial Arts Teacher Education, Washington, D.C.
PUB DATE	Apr 70
NOTE	969p.
EDRS PRICE	EDRS Price MF-$3.50 HC-$48.30
DESCRIPTORS	*Abstracts, *Annotated Bibliographies, *Doctoral Theses, *Field Studies, Industrial Arts, *Industrial Education, Reference Materials, Research, Technical Education, Trade and Industrial Education

ABSTRACT

This compilation of abstracts of dissertations and staff studies, alphabetically listed by author in a loose leaf arrangement, is designed to provide the teacher, student, and administrator of industrial arts, trade and industrial, and technical education programs a single source of information regarding the research done in the field from 1930 to the present. Each of the 962 original abstracts include author, title, degree, date, and granting institution. Availability of document, purpose of study, source of data and method of study, and findings and conclusions are included when available. Additional abstracts of studies are planned on an annual basis. (GR)

ED037583

SUMMARIES OF STUDIES IN INDUSTRIAL ARTS, TRADE AND INDUSTRIAL, AND TECHNICAL EDUCATION

From 1930 -

Dr. David L. Jelden, Editor

This publication is accomplished by
the cooperative efforts of the;

AMERICAN COUNCIL OF INDUSTRIAL ARTS TEACHER EDUCATION

NATIONAL ASSOCIATION OF INDUSTRIAL AND TECHNICAL TEACHER EDUCATION

Initially submitted at the annual convention of
the AIAA, Louisville, Kentucky, April 7-11, 1970

Contributors

Members of the ACIATE Research Committee
   D.L. Jelden, Chairman
   James Buffer
   Marshall Schmitt
   Brandon Smith
   Ronald W. Stadt
Calvin J. Cotrell, Chairman, NAITTE Research Committee
Roy Butler, Acquisitions Specialist, ERIC - VT Clearing House

VT010768

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

****

Preface

This compilation of abstracts was made to provide the teacher, student, and administrator of Industrial Arts, Trade and Industrial, and Technical Education programs, a single at hand source of information regarding the research done in the field. It will serve as a reference for the graduate student who wishes to know where emphasis and past research efforts have been placed. Critical analysis will also identify areas of weakness or omission. This compilation will allow a continual critique to be accomplished. Likewise, it should provide for the comparison of research findings of industrial education to those of other disciplines in education. As such, similarities and differences regarding major problems can be identified.

With the loose leaf arrangement of this compilation, additional studies can be added to the master file each year. An attempt will be made to collect annually, all of the new dissertations and staff studies that have been completed. This compilation will also serve as a source sheet for ERIC in the securing of formal research reports from the sponsoring institutions for inclusion into the ERIC system.

The binders recommended for the loose leaf abstracts are similar to those used by electron tube manufactures for updating their materials. They should be 2½" minimum with expansion to 3½" for supplements. Two of these binders will hold the original document and will provide for the inclusion of additional studies over the next few years.

It is suggested that the abstracts be arranged in one of the following ways. The first might be a listing of research by school. Another might be the arrangement of research by categories related to (1) organization-administration and supervision, (2) adult education, (3) apprenticeship and cooperative education, (4) curriculum (program planning, status, evaluation, and subject matter specialities), (5) history, (6) instructional methods, (7) philosohpy and objectives, (8) teacher education, (9) vocational guidance, placement and follow-up, (10) vocational rehabilitation, (11) testing and evaluation, and (12) safety. A third possibility might be an alphabetical listing by author, which is its present form. Such organization can be set in relation to the needs of the individual or program.

Finally, the abstracts included here were obtained from a number of sources. As such, they are in various levels of completeness. It is requested that if any person finds errors and/or omissions in this list, and can supply more complete information, that such data be sent to Dr. D. L. Jelden, Industrial Arts Department, University of Northern Colorado, Greeley, Colorado 80631. The corrections will be made and included in the next mailout, tentatively set for the spring of each year. Any other suggestions to improve the usefulness or accuracy of this document will also be appreciated.

D. L. Jelden

3

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Abraham, Sr., Ansley, Allyn
(Last name) (First name) (Middle name)

Exact Title AN INVESTIGATION OF THE INTERACTION OF FRESHMEN WITH THEIR CURRICULUM IN THE SCHOOL OF EDUCATION AT FLORIDA A & M UNIVERSITY.

Degree granted Ed.D., Date 1956, No. of pages in report 213

Granted by Indiana University Bloomington, Indiana
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relation between the ability of freshmen and the difficulty of their curriculum in the School of Education at Florida A & M University.

Source of Data and Method of Study:

Data were obtained by administering to 192 freshmen the Otis Quick-Scoring Mental Ability Tests: Gamma Test, Form AM; Nelson-Denny Reading Test for College and Senior High Schools, Form A; Purdue Placement Test in English for College and Senior High Schools, Form A; Kuder Preference Record, Vocational, Form B; Bell Adjustment Inventory, Student Form; and a student questionnaire as well as high school and college freshman grades.

Findings and Conclusions:

High school grades rendered the most measurement value for counseling. In terms of socioeconomic and educational background and adjustment to college life, passing students appeared to be much better off than were failing students. Many students who had ability to do at least "C" work were doing less.

4

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Abramson, Bernard, ______
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF TWO METHODS OF TEACHING.

Degree granted Ph. D., Date 1950, No. of pages in report 190

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain whether there are significant differences in gain and retention of knowledge resulting from using two methods of instruction.

Source of data and method of study:

Two groups were taught by different methods, one conventionally and one using pictoral ideographs. Data were secured through the use of standardized tests which were given to measure immediate gain in knowledge and again after two months and again after three months to measure retention.

Findings and Conclusions:

The data offer evidence that pictoral media and discussion is a valid method of teaching mechanics. All significant gains in information were made by students using pictoral ideographs. For both groups the loss after two months was small. A much greater loss for both groups occurred after three months.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Adams (Last name), Aaron (First name), F. (Middle name)

Exact Title Specialized Tasks Performed by Foremen in Selected Small Industrial Companies.

Degree Granted Ed. D. Date 1961 No. pages in report 131

Granted By University of Cincinnati (Name of Institution) Cincinnati, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To determine if foremen in small companies perform tasks which are performed by specialists in a large company.

Source of Data and Method of Research: Organization charts of large companies were analyzed to determine typical manufacturing service or staff departments. Specific tasks were identified through study of a large industrial company. A survey of small companies was conducted to establish which specialized tasks were performed in small companies and to determine who, including foremen, performed them.

Findings and Conclusions: As many as 12 manufacturing service departments performed at least 70 specialized tasks directly related to the production foreman's function.

In general all small companies required specialized services. Persons, other than production foremen, were responsible for the service function.

There seemed no justification for specialized manufacturing service training for foremen of small companies.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Adams, John, Vose
(Last name) (First name) (Middle name)

Exact Title SCIENCE DEMONSTRATION FOR THE INDUSTRIAL ARTS SHOPS.

Degree granted Ed. D., Date 1947, No. of pages in report 240

Granted by New York University, School of Education New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An attempt to bring about desirable integration of science and industrial arts shop work by demonstrating science principles basic to shop-work. A compilation of shop processes validated by a jury of experts are included.

Source of data and method of study:

Findings and Conclusions:

/

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Adams, Orville, D.
(Last name) (First name) (Middle name)

Exact Title A PLAN FOR VOCATIONAL EDUCATION IN SAN FRANCISCO.

Degree Ed.D., Date 1952, No. of pages in report 250

Granted by Stanford University Stanford, California
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the need for trained workers in San Francisco, and to analyze existing educational facilities and project future needs.

Source of data and method of study:

Data were obtained from a study of the development of vocational education in San Francisco from its inception to the present time, a study of the U. S. Census, a community occupational survey, and other statistical material.

Findings and Conclusions:

San Francisco had a comparatively adequate comprehensive terminal program of vocational education at time of study. The program of industrial arts, of trade and industrial education, and of distributive education need to be expanded. The placement function needs to be centralized. Business education needs coordination and correlation of activity. Flexibility in the terminal training program needs to be maintained. The homemaking program needs to be expanded. Certain physical facilities need to be rebuilt and renovated.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Adams (Last name), Robert (First name), Wayne (Middle name)

Exact Title EDUCATIONAL NEEDS OF RESIDENTS OF ELECTRIFIED FARMS CONCERNING THE USE OF ELECTRICITY.

Degree granted Ed. D., Date 1947, No. of pages in report 239

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the use of electricity on the farm and the need for training in applied electricity, with suggestions as to ways and means of providing this training.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - NAITTE - AIAA

Author Aguirre (Last name), Edward (First name), ____ (Middle name)

Exact Title An Experimental Study of Two Methods of Teaching Engine Lathe Principles and Procedures.

Degree granted ____, Date 1966, No. of pages in report 156

Granted by Arizona State University (Name of institution) Tempe, Arizona. (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An experimental investigation of two methods of teaching engine lathe priciples and operating procedures. The methods investigated were programed instruction-demonstration and illustrated lecture-demonstration.

Source of data and method of study: Engine lathe principles and operating procedures were taught to 58 beginning metalworking students at two colleges using two methods: (1) programed instruction-demonstration; and (2) illustrated lecture-demonstration.

Findings and Conclusions: The two methods of instruction were equally effective in terms of immediate learning and retention as assessed by an achievement test; and in proficiency of engine lathe operation, as measured by a performance test.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Ainsworth (Last name), Chester (First name), B. (Middle name)

Exact Title RELATION OF INDUSTRIAL ARTS INSTRUCTION TO PRACTICES FOLLOWED BY ADULTS IN THE SELECTION, CARE, AND USE OF TOOLS.

Degree granted Ed. D., Date 1956, No. of pages in report 130

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain practices followed by adults, with and without industrial arts instruction, in the selection and care of common hand and power tools and their use in and around the home, to see if there was a significant difference.

Source of Data and Method of Study:

Personal interviews with 100 men who had graduated from 6 central Missouri high schools from 1935 to 1945 and who had continued to reside in these communities. Participants had had no shop instruction beyond high school and worked in occupations which did not involve the sale or use of tools. Group A, consisting of men with 2 or more years of industrial arts instruction, was compared with group B, men who had had no industrial arts instruction.

Findings and Conclusions:

Interviewees with industrial arts instruction expressed significantly more interest in working with tools, and owned more good-quality hand tools than those lacking such instruction. They followed better practices in cleaning tools and performed more jobs with tools involving maintenance on lawn mowers and automobiles. No significant differences were found between the groups with respect to the following: criteria used in the selection of tools; number of power tools owned; number of workshops developed; practices followed in tool repair, maintenance, new construction, and home improvement. The increasing number of home owners attempting do-it-yourself projects would profit from adult classes involving the selection, care, and use of common hand and power tools.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Akey (Last name), Wayne (First name), Wilbur (Middle aame)

Exact Title STUDENT OPINIONS WHICH UNDERLIE THE SELECTION OF A VOCATION

Degree granted Ed.D., Date 1952, No. of pages in report 150

Granted by University of California (Name of insititution) Berkeley, California (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the occupational outlook of the worker by accumulating and analyzing normative data about opinions which underlie the selection of an occupation.

Source of Data and Method of Study:

Data were obtained by questionnaire from 977 boys and 1,007 girls in the twelfth grade in eight high schools in San Francisco. The survey forms were administered by certain selected and trained personnel in each school.

Findings and Conclusions:

Statistically significant differences existed between sex groups and school groups in gross level of occupational selection outlook. Alternate reliability coefficients of .76 and .69 for boys and girls respectively resulted from an analysis of 19 of the 22 items used. There was a significant difference of 10 per cent between the low scorers and high scorers on the 19 satisfactory items. More boys than girls cite professional and managerial occupations as probable. Boys gererally express higher goals than girls. Girls more generally recognize teachers and counselors as sources of occupational information than boys.

12

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - NAITTE - AIAA

Author Akhun (Last name), Ilhan (First name), Ismail (Middle name)

Exact Title Turkish Engineering Students Studying in the United States.

Degree Granted Ed. D. Date 1961 No. pages in report 150

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the background, characteristics, difficulties, future plans, and opinions of Turkish engineering students studying in the United States during the fall semester, 1960-61.

Source of Data and Method of Research: Data were obtained through an information form mailed to 332 Turkish engineering students in 76 institutions. Usable forms were received from 242 students.

Findings and Conclusions: Turkish undergraduate engineering students studying in the United States are older than American students. It appears that English, as it is being taught as a foreign language in Turkish public schools, does not satisfactorily prepare Turkish students to study abroad.

Where Turkish engineering students have a choice, they would select the institutions which they are to attend on the basis of the reputation of the institution. It appears that lack of finances and lack of competency in the use of English are the most serious difficulties encountered by these students studying in the United States. They do seem determined to return to Turkey.

The ultimate educational goal of Turkish engineering students studying in the United States appears to be attaining a graduate degree. Generally, they are satisfied with the institutions in which they are enrolled.

Turkish engineering students who are graduates of higher institutions in Turkey tend to not favor the idea of sending Turkish secondary school youth to the United States, immediately after graduation, for under-graduate study of engineering. They prefer that these students spend some time in Turkish institutions and come to the United States for advanced study.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Allen (Last name), Wilson (First name), S. (Middle name)

Exact Title INDUSTRIAL EDUCATION FOR NEGROES IN SECONDARY SCHOOLS IN FLORIDA WITH SPECIAL REFERENCE TO INDUSTRIAL ARTS EDUCATION.

Degree granted Doctors, Date 1936, No. of pages in report ______

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Alsip (Last name), Benjamin (First name), Harrison, Jr. (Middle name)

Exact Title AN EVALUATION OF INDUSTRIAL ARTS PROGRAMS IN PUBLIC SCHOOLS OF LOUISIANA

Degree granted Ed. D., Date 1965, No. of pages in report 118

Granted by University of Arkansas (Name of Institution) Fayetteville, Arkansas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. To develop a set of standards for industrial arts education in public junior and senior high schools.
2. To evaluate programs of industrial arts in Louisiana based on these standards.
3. To make recommendations for program improvement in the junior and senior high school in Louisiana.

Source of Data and Method of Study:

Data concerning a set of tentative standards which represented factors contributing to the fulfillment of an adequate program of industrial arts were secured from current literature and related studies. The standards were evaluated by a jury of 36 educators in the field of industrial arts education. On the basis of the jury's evaluation, a survey instrument was formulated and sent to 171 selected junior and senior high school industrial teachers for the purpose of evaluating the programs of industrial arts in Louisiana.

Findings and Conclusions:

It was found and concluded that (1) in general, industrial arts programs in the junior high schools, both large and small, were meeting the standards as measured by the evaluative instrument in three aspects of the program. These were Nature of Offerings, Objectives, and Standards of Staff and Instruction. However, there were deficiencies in each. Several deficiencies existed in each of the following phases of the program: Organization, Areas of Industrial Arts, and Physical Facilities, and (2) industrial arts programs in the senior high schools, both large and small, were meeting the standards of the evaluative instrument in Nature of Offerings, Objectives, and Standards of Staff and Instruction. One of more deficiency was noted in each of these divisions. Several weaknesses occurred in three aspects of the programs. These were Organization, Areas of Industrial Arts and Physical Facilities. There was a difference between large and small schools with respect to deficeincies in Physical Facilities.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Amelon, Donald, James
(Last name) (First name) (Middle name)

Exact Title SLIDE-TAPE SELF-INSTRUCTION VERSUS TRADITIONAL GROUP DEMONSTRATIONS IN COLLEGE LEVEL METALWORK.

Degree granted Ed.D. Date 1969 No.of pages in report

Granted by University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To compare experimentally two methods of teaching metalwork at the college level, a particular method of individual self-instruction with slides and sound tape and the conventional group demonstration given by the teacher, with respect to (1) student performance of operations; (2) related information learned; (3) student observation time; and (4) teacher time required for individual instruction in the student performance of operations.

Source of Data and Method of Study:

Two class sections of the course Bench Metal and Welding at Southeast Missouri State College were alternately assigned to the slide-tape method of self-instruction and to the group demonstration method for six selected units of the course. The six course units selected for the study were (1) gas welding, (2) arc welding, (3) casting with a sand mold, (4) tool sharpening, (5) heat treatment of metals, and (6) fastening with bolts, rivets, and screws. Student performance scores were obtained by the combined and weighted ratings of three judges on several factos on each activity or project.

Findings and Conclusions:

1. In two units (gas welding and heat treatment) the demonstration group performance scores were significantly higher. In one unit (arc welding) the slide-tape group performance scores were significantly higher. For the other three units there were no singificant differences. The demonstration was slightly more effective in teaching manipulative operations.
2. In only one unit (tool sharpening) did the two groups differ significantly in the amount of related information learned; the information gain was greater for the slide-tape group.
3. The student observation time of instruction was consistently higher for the demonstration group.
4. Neither method was found to be superior in saving teacher time for individual instruction of students performing operations.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Amthor (Last name), William (First name), Dale (Middle name)

Exact Title AN EXPERIEMNTAL COMPARISON OF THREE METHODS OF PRESENTING SELECTED CONCEPTS OF DESCRIPTIVE GEOMETRY.

Degree granted Ed. D. ,Date 1967 No. of pages in report

Granted by Texas A & M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study were to determine the relative effectiveness of silent filmstrip, sound filmstrip and conventional lecture-demonstration methods of instruction in descriptive geometry.

Source of Data and Method of Study:

The population consisted of all the students enrolled in the descriptive geometry classes in two teacher training institutions. Students were randomly assigned to one of three treatment groups according to levels of ability and were systematically rotated through each mode of presentation. The effectiveness of the methods was tested in an experimental design using three criteria: (1) performance test of initial learning, (2) retention, and (3) attitudes towards the course.

Findings and Conclusions:

The findings of the study supported the following conclusions: (1) there were no significant differnece among the three treatments as measured by initial learning, (2) there were no significant differences among ability levels and treatments as measured by initial learning, and (3) there were no differences in the achievement of students between the two participating institutions. While there were no differences among the treatments, students preferred the lecture-discussion method of instruction to the filmstrip presentations.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Anderson, (Last name), Herbert (First name), Adolph (Middle name)

Exact Title ANALYSIS OF CONTENT OF WOODWORKING TEXTBOOKS BASED ON RESEARCH FINDINGS OF THE FOREST PRODUCTS LABORATORY.

Degree granted Ed.D., Date 1953, No. of pages in report 198

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the extent to which technical information, considered essential by the Forest Products Laboratory personnel for an intelligent understanding in the construction of shop projects, furniture and small frame buildings, has been included in woodworking texts, to ascertain how complete the information has been reported, and to ascertain whether the information in these textbooks is in agreement with the findings of the laboratory.

Source of Data and Method of Study:

Data were obtained from the library of the Laboratory, 621 publications were selected for the study. An analysis was made of the technical information topics included in the publication. These topics were appraised by Laboratory personnel. Finally, the technical information topics appraised essential were checked against ten woodworking textbooks for inclusion, agreement in fact, and completeness.

Findings and Conclusions:

Woodworking textbooks include information on less than one-half of the information topics considered essential by those who have carried out the research, and even then, the items included have scant coverage. Information contained in the textbooks is in almost complete agreement with the findings of scientific research. Information on the findings of wood research is scattered throughout hundreds of small publications which are not readily accessible to the user of wood products. Most wookworking textbooks are written for some specific grade level of students, for a certain area of information, or for students in some specific occupation, therefore, they are suitable as general reference books for woodworking. Authors, publishers, curriculum planners, and teachers might well use the list of woodworking technical information items appraised essential by the Forest Products Laboratory personnel and the publications, as an index to writing and revising books, and to preparing content of courses.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Anderson, Kermit, Peder
(Last name) (First name) (Middle name)

Exact Title AN EXPERIMENT TO DETERMINE THE EFFECTIVENESS OF CARICATURE BOOKLETS IN SUPPLEMENTING CONVENTIONAL MACHINE WOODWORKING SAFETY INSTRUCTION.

Degree granted Ed.D. ,Date 1967 No. of pages in report

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to develop caricature safety booklets and measure their effectiveness in supplementing conventional machine woodworking safety instruction.

Source of Data and Method of Study:

Safety booklets and tests for selected pieces of woodworking power equipment were developed and evaluated by a qualified panel of experts. A total of 291 students enrolled in one of nine machine woodworking courses were assigned to experimental and control groups. Initial learning and retention were measured for each of the six machine woodworking safety units of instruction.

Findings and Conclusions:

The findings indicated that the experimental method was significantly better for three of the safety units and that there was a significant difference among teachers as measured by initial learning. Similar findings were revealed when tests of retention were used as a criterion measure. It was, therfore, conlcuded that while safety instruction is largely dependent upon the teachers mode of presentation, safety instruction, supplemented with caricature safety booklets, will result in greater initial learning and retention of safety instruction than the conventional method used without the assistance of the booklets.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE.

Author Anderson, Ray, N.
(Last name) (First name) (Middle name)

Exact Title THE DISABLED MAN AND HIS VOCATIONAL ADJUSTMENT; A STUDY OF THE TYPES OF JOBS HELD BY 4,404 ORTHOPEDIC CASES IN RELATION TO SPECIFIC DISABILITY.

Degree granted Ph.D., Date 1932, No. of pages in report ____

Granted by Teachers College, Columbia University New York, New York
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the specific handicaps of individuals correlated with the various types of occupations in which they have been engaged. The records studied cover the period from April 1917 to April 1930.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Anderson (Last name), Robert (First name), Granville (Middle name)

Exact Title The Contribution of Industrial Arts Instruction to Occupational Knowledge.

Degree granted Ed. D., Date Spring 1967 No. of pages in report 130

Granted by Colorado State College (Name of institution) Greeley, Colorado. (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To determine whether high school senior boys receive occupational information from experiences in certain industrial arts courses.

Source of data and method of study: Study was restricted to the activity areas of metal and graphic arts. Population of the study consisted of all available senior boys enrolled in twenty-five cooperating public high schools offering instruction in industrial arts and located in Lancaster County and York County, Pa.

An occupational information test was used as the instrument of research. The reliability coefficient of .84 was considered an acceptable level of reliability for the test. The test answer cards were sorted into the various population groups according to their experience.

Findings and Conclusions: Students with graphic arts experiences possessed more occupational knowledge of the graphic arts industries than other students. Those students with more than two semesters of graphic arts possessed more occupational knowledge than students with 1 or 2 semesters of graphic arts. The same was true of those students with metal experiences. Students who had both graphic arts and metal experiences possessed more occupational knowledge of the metal industries than students who had only metal experiences.

Analysis of the data indicates that the greatest gain in occupational knowledge occurs in the first semester of a metal or graphic arts class; therefore it is recommended that all boys take a minimum of one semester in each of these areas.

Since it can be assumed that other industrial arts curricular areas similarly provide occupational information, it is recommended that the industrial arts curricula be expanded to provide experiences more representative of the many industries.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRAIL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Anderson (Last name), W. (First name), Carlisle (Middle name)

Exact Title STUDENT TEACHING IN INDUSTRIAL ARTS EDUCATION

Degree granted Ph. D., Date 1954, No. of pages in report 463

Granted by University of Minnesota (Name of institution) Minneapolis, Minnesota (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To report current information and opinions concerning student teaching in industrial arts as it is administered in American colleges and universities.

Source of Data and Method of Study:

Data were obtained from a questionnaire sent to 109 institutions of higher education and 104 cooperating secondary school industrial arts teachers, current literature, and administrative forms used in higher education institutions.

Findings and Conclusions:

Current literature contains little information on industrial arts student teaching. "Methods" in industrial arts teaching is more often considered to be a departmental offering than is a course in "student teaching." About two-thirds of the campus laboratory schools have their own industrial arts shops. Sixty-two per cent of the one-teacher-training institutions remunerate critic teachers in some way. About one-third of the institutions assign student teachers for five or more hours per day. Combined student teaching and methods courses under the same instructor seem best.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Anderwald, Carl, Joseph
(Last name) (First name) (Middle name)

Exact Title NATIONAL DEFENSE TRAINING PROGRAM FOR PRE-EMPLOYMENT MACHINE SHOP PRACTICE IN CENTRAL NEW YORK STATE.

Degree granted Ph. D., Date 1947, No. of pages in report 306

Granted by Cornell University Ithaca, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the contributions to industry and vocational education made by the War Industries Training Program in central New York with implications for future planning in the field of vocational education. The administration, supervision, and organization of twenty-three pre-employment National Defense Training machine shop programs are discussed. The purpose of the study was to develop a course of study in practical home mechanics suitable for use in either a junior or senior high school.

Source of data and method of study:

Data were secured through a questionnaire sent to the parents. Items for the questionnaire were selected from home mechanics course of studies, magazine articles, textbooks, and general shop publications.

Findings and Conclusions:

The report contains the significant items derived from the survey form.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - NAITTE - AIAA

Author Andrews, Earl, Raymond
(Last name) (First name) (Middle name)

Exact Title The Status Of And Need For Vocational-Industrial Education in Jefferson County Missouri.

Degree Granted Ed. D., Date Jan., 1968., No. pages in report 171

Granted by University of Missouri, Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To assess the status and extent of need for vocational-industrial education within Jefferson County, and to identify criteria which will provide a more objective basis for program and curriculum development.

Source of Data and Method of Study: The study focused on employment opportunities, student interest, and financial considerations, as related to vocational-industrial education in Jefferson County, Missouri. Information forms were utilized to assess student interest and opinions. Other criteria relevant to the development of the vocational-industrial program were identified from related literature.

Findings and Conclusions: The vocational-industrial program within the county seemed inadequate in relation to the critical need for workers in these occupations within the labor market area, and Jefferson College appeared to be in a better position than the high school districts to provide training for these occupations.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Armbrust, Robert, William
(Last name) (First name) (Middle name

Exact Title AN INVESTIGATION OF THE ROLE OF SELECTED NON-VERBAL INTELLIGENCE FACTORS IN BEGINNING DRAFTING SUCCESS.

Degree granted Ph. D., Date 1969, No. of pages in report 183

Granted by Southern Illinois University Carbondale, Illinois
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate the relationship within and between non-verbal intelligence factors and success in beginning drafting at the high school level; also the relationship of age and industrial arts experience to drafting success.

Source of Data and Method of Study:

Differential Aptitude Test scores and other normative data were collected from a representative sample of beginning drafting students in Nashville, Tennessee and combined to obtain indices of non-verbal intelligence and academic aptitude. Two and three-criteria analysis of variance and multiple regression analysis techniques were then employed to investigate the relationship of these study variables to drafting success.

Findings and Conclusions:

Students with medium-to-high levels of non-verbal intelligence or of the individual sub-traits abstract reasoning or spatial relations, achieved higher levels of success, significant at the .01 level, than those with low-to-medium levels of these traits. Drafting success was shown to be the result of medium-to-high levels of two or more non-verbal traits, seldom the result of a single trait, even at its highest levels. Non-verbal correlates of drafting success were found to be nearly identical for both first and second semester, despite differing course content. After correction for attenuation, study findings indicated that non-verbal intelligence accounted for 36% of the variability in drafting course grade. The individual non-verbal sub-traits of abstract reasoning accounted for 12.6%, spatial relations 15.4%, and mechanical reasoning 7.9% of course grade variability. Both chronological age and previous industrial arts experience reflected negative relationships to non-verbal intelligence and to drafting success. It was concluded from the study that the non-verbal concept was valid, since it was shown to be operative in drafting success in traditional beginning drafting courses at the high school level.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Arnold (Last name), Frank (First name), J. (Middle name)

Exact Title IS VOCATIONAL CO-OPERATIVE WORK IN NEW YORK CITY SCHOOLS A SUCCESS OR A FAILURE?

Degree granted Ph.D., Date 1932, No. of pages in report ____

Granted by New York University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

An evaluation of the co-operative educational plan in New York City (1915 through 1932) in an effort to determine the extension of such programs and the attitude of the school authorities regarding the programs.

Source of Data and Method of Study:

Findings and Conclusions:

26

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Arnold (Last name), Walter (First name), Martin (Middle name)

Exact Title FEDERAL-STATE COOPERATIVE ACTIVITIES IN VOCATIONAL EDUCATION.

Degree granted Ed. D., Date 1957, No. of pages in report 223

Granted by Oklahoma State University (Name of institution) Stillwater, Oklahoma (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To identify, select, define, and assemble specific mandatory and voluntary cooperative activities that should continue to exist or be newly established between the Vocational Division of the U.S. Office of Education and the State boards for vocational education.

Source of Data and Method of Study:

Federal, State, and local leaders in vocational education. A checklist was developed and evaluated by a jury of vocational educational leaders.

Findings and Conclusions:

Seventy-eight cooperative activities in seven different classifications--administration, supervision, teacher education, instructional materials, physical facilities, public relations, and research--were identified as important joint actions in which the Federal office and State boards might participate.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Ashbrook, William, D.
(Last name) (First name) (Middle name)

Exact Title THE DEVELOPMENT OF INDUSTRIAL EDUCATION IN THE SCHOOLS OF PENNSYLVANIA

Degree granted Ph. D., Date 1944, No. of pages in report ________

Granted by University of Pittsburgh Pittsburgh, Pennsylvania
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A detailed account of the evolution of industrial education in Pennsylvania from its beginning.

Source of data and method of study:

Findings and Conclusions:

28

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Ashley, (Last name), Lawrence (First name), F. (Middle name)

Exact Title INDUSTRIAL ARTS EDUCATION IN TEACHER EDUCATION

Degree granted Doctors, Date 1936, No. of pages in report ____

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Atteberry, (Last name), Pat (First name), H. (Middle name)

Exact Title NATURE AND AMOUNT OF PRE-EMPLOYMENT TRAINING NEEDED FOR ENTRY OCCUPATIONS IN THE KANSAS CITY LABOR MARKET AREA.

Degree granted Ed.D., Date 1954, No. of pages in report 191

Granted by Univeristy of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the nature and amount of pre-employment training needed by workers in entry occupations in Kansas City, and the extent to which existing educational programs were meeting these needs.

Source of Data and Method of Study:

Job opportunities available to high school youth were obtained from 1950 Census of United States; data dealing with nature and amount of pre-employment training needed were secured by interviewing 29 selected employers; and training completed by high school graduates was collected from school records.

Findings and Conclusions:

Females in Kansas City were employed principally as clerical workers. Males, in the main, worked as semi-skilled and skilled craftsmen in manufacturing, construction, and communication. Employers preferred the high schools give two years of specialized pre-employment training for only the skilled crafts, clerical, and certain technical occupations. For beginning workers in the semi-skilled operative jobs, employers preferred approximately one year of training of a general nature. Although 75 per cent of the employers prefer beginning workers for entry jobs who are high school graduates, only approximately 50 per cent require this as a hiring policy. The proportion of male high school graduates completing two years or more of day-trade training fell far short of the proportion of males working in skilled industrial occupations. A larger proportion of white females were completing two years or more of commercial education than the proportion of white females employed in clerical occupations. The ratio of Negro female high school graduates completing two years or more of commercial courses to those Negro females employed in the clerical occupations was six to one.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Austin (Last name), Robert (First name), T. (Middle name)

Exact Title INDUSTRIAL EDUCATION PROGRAMS IN SELECTED FOREIGN COUNTRIES ASSISTED BY THE UNITED STATES GOVERNMENT 1952-1962.

Degree granted Ed. D., Date 1964, No. of pages in report 338

Granted by Wayne State University (Name of institution) Detroit, Michigan (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To reveal the rationale for United States assistance and describe the contributions made in establishing and maintaining industrial education programs.

Source of data and Method of Study:

Data were obtained from AID files in Washington, D.C., correspondence reports, materials on campus, and from personal interviews. This was compiled for the 1952-1962 decade.

Findings and Conclusions:

The need for assistance in foreign countries to improve curricula, upgrade teacher education, plan laboratory facilities, write instructional materials, and construct teaching aids was noted. Areas of conflict and misunderstanding were identified and suggestions for improvement of contracting arrangements were listed.

In comparison to programs in other fields, industrial education programs have been the most effective of all the educational aid programs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDSUTRAIL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Axelrod, (Last name), Aaron (First name), (Middle name)

Exact Title A COURSE OF STUDY IN APPLIED SCIENCE FOR MACHINE-SHOP APPRENTICES.

Degree granted Ed.D., Date 1951, No. of pages in report 355

Granted by New York University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To develop a course of study in applied science which will be directly related to the usual jobs performed by apprentices in machine shops during their term of apprenticeship.

Source of Data and Method of Study:

Data were secured through trade analysis of the machine shop trade in use in apprentice training institutions and the analysis of these for their science implications in the fields of chemistry, physics, and metallurgy.

Findings and Conclusions:

A course of study was developed that can provide a definite program of science instruction as related to machine shop procedures.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Baab (Last name), Clarence (First name), T. (Middle name)

Exact Title ANALYSIS, DEVELOPMENT AND ORGANIZATION OF A PROGRAM FOR THE PREPARATION OF INDUSTRIAL ARTS TEACHERS AT COLORADO STATE COLLEGE OF EDUCATION

Degree granted Ed.D., Date 1950, No. of pages in report 128

Granted by Pennsylvania State College (Name of institution) State College, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To bring together data, gathered over a three-year period, with a view of improving the program for the preparation of industrial arts teachers at Colorado State College of Education. Types of positions available, demands of school districts and qualifications and positions of former students were investigated.

Source of data and method of study:

Data were obtained from the State Superintendent of Public Instruction office; industrial arts teachers of Colorado; school administrators; high school transcripts of Colorado State College of Education graduates in industrial arts during the period, 1939--48, and personal interview with teacher, supervisors and school administrators.

Findings and Conclusions:

Industrial arts in Colorado is becoming more "generalized" in the public schools. School administrators of Colorado desire to make the following changes; Increase areas of work taught, and admit girls to industrial arts classes. School administrators not offering industrial arts in their schools plan to organize and put into service a general type of shop when facilities are available. The 72 quarter hours of industrial arts is not sufficient to meet the needs of the industrial arts teacher in Colorado today. The first major improvement needed is more room, a plan to replace obsolete equipment in all areas of work.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Backus, Kerby, Dewel
(Last name) (First name) (Middle name)

Exact Title A STUDY OF PERCEIVED OBJECTIVES OF INDUSTRIAL ARTS AMONG SUPERINTENDENTS, INDUSTRIAL ARTS COORDINATORS, AND INDUSTRIAL ARTS TEACHERS OF SIX PUBLIC SCHOOL DISTRICTS OF TEXAS.

Degree granted Ed.D., Date 1968 No. of pages in report 174

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To show how persons rated industrial arts objectives and measure the agreement among those whose decisions influence industrial arts in local schools.

Source of Data and Method of Study:

The attention to be give specific industrial arts objectives in the school program was studied in six public school districts of Texas, which had 4,319 to 70, 279 average daily attendance. The Q-sort instrument contained fifty-four statements of student behavior (six for each industrial arts objective) characterizing attitudes, concepts, skills, knowledge, appreciation, and values which a "typical" industrial arts student should possess. Priorities for specific industrial arts objectives were determined from ratings of related statements.

Findings and Conclusions:

1. Conflicts in priorities within and between local districts may prevent coordinators and teachers from using their own methods of instruction.
2. Industrial arts teachers agree on emphasis to be assigned objectives, but restrictions are placed on their freedom to apply the emphasis because of disagreements among superintendents and coordinators.
3. Low importance attached to certain objectives in the study indicates they are not as high in importance as the literature of the field indicates.
4. Disagreement on the objectives among the superintendent and industrial arts teachers tends to increase with district size, which suggests that superintendents of larger districts should learn more about industrial arts or rely entirely upon coordinators and teachers to determine emphasis in instruction.
5. Eleven principles for Q-sort construction were identified and the Q-technique was described as a reliable rating method if the Q-sort is developed according to the rules cited. The .01 level of significance or higher was recommended as a standard of agreement among multiple ranks when Kendall's coefficient is used as an index.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bader (Last name), Louis (First name), (Middle name)

Exact Title SURVEY OF COURSE CONSTRUCTION FOR SALES TRAINING IN THE ELECTRICAL INDUSTRY.

Degree granted Ph.D., Date 1932, No. of pages in report 222

Granted by New York University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study of sales training programs of the twenties for some of the major electrical companies. It recommends that college courses in sales training be followed by specific training.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Bagley, Ronald, E.
(Last name) (First name) (Middle name)

Exact Title A STUDY TO DETERMINE THE CONTRIBUTIONS OF INDUSTRIAL ARTS TO THE LEISURE TIME ACTIVITIES OF THE GRADUATES OF NORTHEAST MISSOURI STATE TEACHERS COLLEGE.

Degree granted Ed.D., Date 1965 No. of pages in report 250

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To determine the contributions of industrial arts to the leisure time activities of certan graduates of Northeast Missouri State Teachers College in the areas of major leisure time activities of the industrial arts majors, those who had one or more industrial arts courses, and those who had no courses in industrial arts.

Source of Data and Method of Study:

Data obtained from the records of the Alumni Office and the Registrar's Office on the campus of Northeast Missouri State Teachers College included the names and addresses of the graduates of the college and the courses which they took while in college. Two groups of graduates were contacted through a questionnaire which provided the information used in this study.

Findings and Conclusions:

1. The age of the graduates and size of the town in which they lived had more of an influence on the type of hobbies which they practiced as a major leisure time activity than did their marital status, the number of children they had, their salary or their occupation.
2. The graduates practiced the outdoor activities of walking, gardening, and home repair most.
3. Reading and home exercise were the most popular indoor activities.
4. A large percentage of the graduates thought that portions of some college courses should be devoted to leisure time activity instruction.
5. A large portion of the graduates enjoyed crafting, repairing, and improving things in general.
6. The home was by far the most common area for the exercising of the graduates' hobbies with the general area of outdoors mentioned second.
7. The graduates who had taken industrial courses while in college were more likely to be using an area of industrial arts as a major leisure time activity than those who received no instruction in industrial arts in college.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bailey (Last name), Gerald (First name), Duane (Middle name)

Exact Title FOUNDRY TECHNOLOGY, A TECHNOLOGICAL RESEARCH AND CURRICULUM ANALYSIS, WITH IMPLICATIONS FOR JUNIOR HIGH SCHOOL INDUSTRIAL ARTS.

Degree granted Ed.D., Date 1964, No. of pages in report 241

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To analyze and describe foundry technology, to ascertain how it was taught in the junior high industrial arts program, and to identify up-to-date teaching units.

Source of Data and Method of Study:

The primary source of technical literature was the Foundry magazines and the Modern Castings magazines published between January 1959 and December 1963. The content of junior high industrial arts courses was secured from information forms returned by 523 industrial arts teachers.

Findings and Conclusions:

1. The foundry industry has been significant in the industrial development of civilization.
2. The foundry industry is large enough to be considered a part of industrial arts.
3. Curricular material can be derived from current foundry technology.
4. Foundry instruction in most junior high schools is out of date.
5. New molding and casting technology should be taught.
6. Industrial arts needs more adequate library facilities.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Bailey (Last name), James (First name), Hamilton, Jr. (Middle name)

Exact Title Relation of Instruction in Industrial Arts to Knowledge of Design.

Degree Granted Ed. D. Date 1961 No. pages in report 131

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the relation of experience in industrial arts to achievement in design as measured by an instrument constructed specifically for the study.

Source of Data and Method of Research: Data were obtained by administering the design test to a total of 806 students in 31 high schools in Michigan during the school years of 1959-60 and 1960-61. Six groups of high school senior boys, with increasing amounts of industrial arts, were compared on their knowledge of design. Analysis of variance was used to find out whether the groups differed significantly in their design scores, intelligence, and scholastic ability. Design score means were then adjusted statistically to allow for variations in intelligence and scholastic ability.

Findings and Conclusions: Continued study of industrial arts, as represented by the possession of more units of industrial arts, does not yield an advanced knowledge of design. Apparently, neither industrial arts departments nor art departments are making significant contributions to the design knowledge of high school senior boys as measured by the instrument used in this study.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Baily, Athol, Romayne
(Last name) (First name) (Middle name)

Exact Title EVOLVING CONCEPTS OF INDUSTRIAL EDUCATION IN THE THINKING OF ORGANIZED INDUSTRIAL MANAGEMENT.

Degree granted Ed.D., Date 1949, No. of pages in report 215

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To trace the evolution of the concept of industrial education in the thinking of selected industrial employer associations from 1880 to 1949 and to suggest implications in the operation of programs of industrial education.

Source of Data and Method of Study:

A study was made of the Proceedings of Annual Conventions and official journals of the National Association of Manufacturers, National Metal Trades Association, United Typothetae of America, National Association of Builders of the United States of America, and the Associated General Contractors of America.

Findings and Conclusions:

Historically, the employer has been responsible for training of industrial workers. The schools, until recently, confined their efforts to academic training of those who were to enter the professions. The basic idea underlying management's interest in industrial education is economics. Training should be open to all who can profit by the training. Management has supported industrial education for upgrading workers already employed, but has not insisted that this instruction be supplementary to their daily employment. According to management, the public schools should provide a broad, basic, fundamental and well rounded education, and an effective guidance program for future workers, and accepts the responsibility of providing the highly specialized training required of workers, in the belief that this phase can be best done on the job. Management is more interested in training during labor shortages. Interest can be expected to subside when the urgency ends. Management, much earlier than labor, took an active part in the national movement for vocational education. Management's original opposition to labor's participation in industrial education was due to the fact that it wanted to control the training and the supply of workers. This attitude, however, has changed and management now holds that a sound program of industrial education can be carried on only when a cooperative working relationship is maintained among management, labor and the educator.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Baird (Last name), Ronald (First name), James (Middle name)

Exact Title The Application of John Dewey's Philosophy to Industrial Arts .

Degree Granted Ed. D. Date 1960 No. pages in report 256

Granted By Michigan State University (Name of Institution) East Lansing, Michigan (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C.

Purpose of Study: To develop a consistent Philosophical approach to a program of industrial arts teacher education based upon the beliefs and theories of John Dewey.

Source of Data and Method of Research: Material for the study consisted of the majority of the writings of John Dewey and writings by industrial arts teacher educators concerning the experimentalist position. The study is philosophical research using the critical interpretation approach.

Findings and Conclusions: It was concluded that a program based on experimentalism would reflect man's needs in his social environment. The objectives of the industrial arts teacher education program would be unique only to the profession of teaching and would emphasize the values of democracy, scientific methodology, social efficiency, and the place and needs of man in our industrial society.

In the curriculum, the emphasis of subject matter would be on activities involving materials rather than on materials man works with in satisfying his goals. The curriculum would induce activities of problem-solving, experimentation, investigation, critical thinking, and extensive planning, research, and creativity.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Baker, (Last name), Alfred (First name), Elmore (Middle name)

Exact Title A SURVEY AND ANALYSIS OF SENIOR HIGH SCHOOL PRACTICAL AND APPLIED ARTS OFFERINGS TO DETERMINE THE CONTENT WHICH MAY BE UTILIZED IN PRE-EMPLOYMENT TRADE EDUCATION

Degree granted Ed.D., Date 1943, No. of pages in report 396

Granted by University of California (Name of institution) Berkeley, Calif. (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study showing the relationship between high school courses and course selection in trade schools. It indicates the advantages of industrial arts training for vocational students and desirable subject work in other fields.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Baker, Glenn, E.
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF THE PROBLEM-SOLVING METHOD OF PROJECT CONSTRUCTION AND CONVENTIONAL METHODS IN TEACHING THE LABORATORY OF A COLLEGE COURSE IN BEGINNING ELECTRICITY.

Degree granted Ed. DE. Date 1966, No. of pages in report

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine the effectiveness of a problem-solving approach to project construction in teaching only the laboratory portion of a beginning industrial educational electricity course as measured by initial learning, retention, performance and attitudes.

Source of Data and Method of Study:

A total of forty-two students in a basic electricity course were paired on the basis of a pre-test in electricity and were randomly assigned to experimental and control groups. The two treatments consisted of problem solving projects and assigned projects. The experimental groups had no formal laboratory experience (Problem solving groups).

Findings and Conclusions:

The findings indicated that there was no difference between treatments as measured by (a) initial learning (b) manipulative performance and (c) attitudes towards the course. High and low ability students performed equally well with either treatment. While differences were not significant, it was noteworthy to conclude that since students can learn the major principles of electricity without benefit of formal laboratory work, the problem solving technique may prove to be the more efficient of the two methods studied in this investigation.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ball (Last name), Charles (First name), E. (Middle name)

Exact Title FILMED DEMONSTRATIONS FOR INDUSTRIAL ARTS: SOUND MOTION PICTURES OF SELECTED INDUSTRIAL ARTS DEMONSTRATIONS WHICH MAY BE USED AS A TEACHING DEVICE.

Degree granted Ed. D., Date 1958, No. of pages in report

Granted by New York University (Name of Institution) New York City, New York (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop sound motion picture films of manipulative demonstration which have applicability for the industrial arts shop.

Source of Data and Method of Study:

Using a purpose sample of subject matter experts and State syllabi, twenty two manipulative demonstrations were selected and recorded on sixteen millimeter black and white film. A specially devised evaluation instrument was used to determine the degree of acceptability of each film as determined by subjective opinions of a group of experts.

Findings and Conclusions:

The ratings of the experts suggest that the films are of high quality and may be an effective mode of instruction for industrial arts shop. A test of the effectiveness of the films in an actual classroom was considered to be beyond the scope of this developmental study.

43

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ballard, John, R.
(Last name) (First name) (Middle name)

Exact Title A STUDY TO DETERMINE THE EFFECTIVENESS OF TWO METHODS OF INSTRUCTION OF ACHIEVEMENT AND RETENTION IN INDUSTRIAL ARTS.

Degree granted Ed. D., Date 1966, No. of pages in report

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine the extent of a achievement and retention of learning of college students over a unit of instruction on wood joinery when instructional methods of programmed instruction and lecture-discussion were used.

Source of Data and Method of Study:

The sample consisted of 296 beginning college students representing nine Texas colleges. Students were randomly assigned to treatments in a experimental matched pair design. Students were matched on pre-test scores and were administered tests of initial learning, and retention at the conclusion of the experiment.

Findings and Conclusions:

The findings demonstrated that the programmed instruction technique was superior to the lecture-discussion presentation for four units of woodworking as measured by both initial learning and retention test scores. It was concluded that programmed instruction has merit as an instructional method for al least certain types of content areas in the field of industrial education.

44

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Baranyai, William, A.
(Last name) (First name) (Middle name)

Exact Title ADJUSTMENT EXPERIENCES OF INDUSTRIAL EDUCATION TEACHERS OF THE DETROIT PUBLIC SCHOOLS.

Degree granted Ed. D., Date 1955, No. of pages in report

Granted by Wayne State University Detroit, Michigan
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To identify the major adjustment experience found to be common to all new industrial education teachers in the Detroit Public Schools.

Source of Data and Method of Study:

A total of 303 newly assigned industrial education teachers provided information on their personal backgrounds, professional preparation, interests, plans, value judgments, and employment experience.

Findings and Conclusions:

There are no adjustment experiences found to be common to all new teachers, but the esprit-de-corps level was affected by the factors of age, level of education, number of assignments, and type or grade level involved.

Favorable adjustment responses were associated more frequently with older teachers; higher morale was associated with higher levels of formal education; vocational certification was positively related to adjustment experiences; and three or more semesters of student teaching in Detroit were associated with positive professional attitudes. Professional adjustment was related to personality factors, quality of adminstration, and quality of physical facilities.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Barich, Dewey, Frederick
(Last name) (First name) (Middle name)

Exact Title DEVELOPMENT AND PROJECTED ROLE OF THE DETROIT INSTITUTE OF TECHNOLOGY.

Degree granted Ed. D., Date 1961, No. of pages in report 257

Granted by Wayne State University Detroit, Michigan
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To obtain data that would assist the Board of Trustees of the Detroit Institute of Technology in its effort to project the future role of the Institute.

Source of Data and Method of Study:

The problem was divided into four broad categories: (1) introduction to the study, (2) a brief history of the D.I.T., (3) the present status, and (4) the projected role of the Detroit Institute of Technology.

The historical data were gathered by reviewing the literature,records, and documents. This was done so that the origin and purpose of the first educational program of the Institute could be determined.

Findings and Conclusions:

The administration of the D.I.T. was traced from its inception in the Y.M.C.A. to an institution of independent status in March, 1954.

1. If the Detroit Institute of Technology is to undertake its share of alleviating the college enrollment in the Detroit-Windsor area, it must consider increasing its enrollment. This should not be done, however, at the sacrifice of quality in its educational program.
2. For the time being the D.I.T. should maintain its present curriculum offerings in Engineering, Business Administration, and Arts and Sciences. The way should be left open for consideration of a graduate program if conditions warrant and financial resources are available. Here again, a graduate program should not be added at the expense of diluting the quality of the undergraduate program.
3. The D.I.T. should be relocated on a downtown site.
4. The D.I.T. should continue to serve those students who are forced by circumstance to continue their education on a part-time basis.
5. Every effort should be made to supplement income from tuition and fees so that students will not have to pay more than 50% of the operating costs.

46

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Barlow (Last name), Melvin (First name), L. (Middle name)

Exact Title A HISTORY OF TRADE AND INDUSTRIAL EDUCATION IN CALIFORNIA.

Degree granted Ed. D., Date 1949, No. of pages in report 325

Granted by University of California at Los Angeles (Name of institution) Los Angeles, California (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A review of the general history of trade and industrial education in the United States from 1800 to 1917 and in California from 1854 to 1947. Such topics as the development of the philosophy of industrial education in the California state administration of trade and industrial education and teacher training are discussed.

Source of data and method of study:

Findings and Conclusions:

47

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Barnette (Last name), W. (First name), Leslie, Jr. (Middle name)

Exact Title OCCUPATIONAL APTITUDE PATTERNS OF COUNSELED VETERANS.

Degree granted Ph.D., Date 1949, No. of pages in report 385

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the effectiveness of test pattern data for the vocational and educational guidance of 890 World War II veterans counseled at the Vocational Service Center Branch, YMCA, New York City, and the occupational differences between disabled and non-disabled veterans as well as with their status two years after their advisement and guidance.

Source of data and method of study:

A pilot study preceded the actual study itself. A questionnaire was used to gather the information. A relationship is set up to indicate occupational patterns representing seven different occupational fields. Questionnaires were analyzed in terms of these categories: "Never began," "drops," "continuous," "completed."

Findings and Conclusions:

In most respects, the non-disabled group was similar to the disabled group. The latter group provided several signs of greater occupational training stability. The largest group contains clients who began and are still pursuing the approved training. A high percentage of all respondents indicated satisfaction with current training status. Counselor prognoses for the "never begans" and the "drops" were far more accurate than chance values. The patterns based on unrelated occupational areas have been shown to be distinct when inter-occupational comparisons are made. Those based on related occupational fields show moderate, but not high, similarity. The concept of the occupational aptitude pattern is thus justified in terms of such over-all similarity-dissimilarity comparisons.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author	Baron (Last name)	Andrew (First name)	William (Middle name)

Exact Title THE EFFECTIVENESS OF TEACHING A PSYCHOMOTOR TASK VIA A TEACHER PREPARED VIDEO-TAPE RECORDING.

Degree granted Ed.D., Date 1968, No. of pages in report ____

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The problem of the study was to determine the effectiveness of teaching a psychomotor task via a teacher prepared video-tape recording as compared with a live demonstration.

Source of Data and Method of Study:

A video-tape recorded lecture was presented to one group and live demonstrations presented to the other. The lecture provided information on composing and justifying a line of type by hand. Performance was measured by a psychomotor test and a multiple-choice test.

Findings and Conclusions:

Seventh grade students were taught to compose and justify a line of type by hand by means of live demonstrations or video-tape recording. Written and performance data were obtained immediately after instruction and after a delay of one day. The video-tape and the conventional method were equally effective in teaching the psychomotor task, and in teaching the cognitive information to upper ability students. Students of lower ability were less effective with the video-tape presentation when criterion tests were administered after a delay of one day.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Barrow (Last name), Richard (First name), Wesley (Middle name)

Exact Title A COMPARISON OF THE ACHIEVEMENT OF VOCATIONAL AUTOMECHANICS STUDENTS IN FIRST YEAR INDUSTRIAL COOPERATIVE TRAINING.

Degree granted ____________ Date August, 1969 No. of pages in report ________

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the comparative effectiveness of two different programs of vocational automechanics instruction. The contribution of prior courses in power mechanics, automechanics, or transportation to achievement in first year vocational automechanics was also examined.

Source of Data and Method of Study:

The research procedure included the following: (1) identification of participating schools and instructors, (2) construction and validation of the test instrument, (3) administration of the instrument as a pre- and post test, and (4) analysis of the data. The means of the pre-tests, post-tests, and gains were analyzed to determine the comparative achievement of the students. The analyses were made with respect to the overall groups in the two instructional methods and the prior training and no prior training subgroups within each method. Analysis of variance and analysis of covariance were utilized in the statistical tests.

Findings and Conclusions:

1. There is no difference in the achievement of students enrolled in first year vocational day trade automechanics and students enrolled in first year industrial cooperative training automechanics.
2. Both day trade and industrial cooperative students with prior training, however, score higher than students without prior training on automechanics tests, both at the beginning and near the end of formal vocational automechanics courses.
3. Industrial cooperative students possess greater knowledge of automechanics than day trade students at the time of entry into the first high school vocational automechanics course.
4. There is no difference between students in the two programs with respect to knowledge of automechanics.
5. The similarity of mean scores on the post-test does not justify the recommendation of either training program over the other in terms of establishing vocational training in automechanics.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - ATAA - NAITTE

Author Bartel, Carl, Ray
(Last name) (First name) (Middle name)

Exact Title ORIGIN, DEVELOPMENT AND WORK OF THE AMERICAN VOCATIONAL ASSOCIATION.

Degree granted Ed. D., Date 1959, No. of pages in report 517

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To trace the historical development of the American Vocational Association from 1906 to 1959, to record the major details of its origin, and to describe the work of the Association in the promotion of practical arts and vocational education.

Source of Data and Method of Study:

The proceedings of conventions, reports of committees, minutes of business and executive meetings, official publications of the American Vocational Association and its parent organizations, and pertinent texts, periodicals, and bulletins.

Findings and Conclusions:

The National Society for the Promotion of Industrial Education was formed at New York City on Nov. 16, 1906, and reorganized on Feb. 23, 1918, forming the National Society for Vocational Education. The Vocational Education Association of the Middle West was organized at Chicago on January 16, 1914. The initial step to form the American Vocational Association was taken by the National Society on Dec. 4, 1925, and the final step by the Middle West Association on Mar. 20, 1926. As the American Vocational Association grew in membership, financial resources, and prestige it produced publications, increased its services to members and non-members, cooperated with other national organizations, and actively sponsored legislation concerning vocational education. Through the years it has been largely operated by practical arts and vocational education interests of the East and Middle West. It has not secured the membership of many reimbursable teachers or a great percentage of practical arts teachers.

51

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bas (Last name), Radha (First name), C. (Middle name)

Exact Title AN ANALYTICAL STUDY OF ELECTRICAL CURRICULA IN SELECTED TECHNICAL INSTITUTES OF NORTHEASTERN UNITED STATES.

Degree granted Ph. D., Date 1950, No. of pages in report 204

Granted by Cornell University (Name of institute) Ithaca, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the nature and content of electrical curricula in the technical institutes of northeastern United States.

Source of data and method of study:

Data were obtained from published, typewritten and mimeographed material, and interviews of faculty of technical institutes.

Findings and Conclusions:

In order of frequency the institutes included are: State supported, proprietary, privately endowed, and extension divisions of universities. The total enrollment in these institutes varies from 55 to 2,024 with a median of 495. the enrollment in electrical curricula ranges from 9 to 1,296 with a median of 112. Electrical curricula offered in technical institutes are broadly of 4 types: Electrical technology, electrical power and machinery, electrical communications, and industrial electronics.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Baskin (Last name), Samuel (First name), ____ (Middle name)

Exact Title THE GRADUATE OF THE COLLEGE WORK-STUDY PROGRAM.

Degree granted Ph.D., Date 1954, No. of pages in report 190

Granted by New York University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relative effectiveness of a college work-study program in aiding students in their occupational selection and in contributing to their later job satisfaction and occupational success.

Source of Data and Method of Study:

Data were secured through a questionnaire sent to all graduates receiving their degrees during the period, 1939-41. Two groups were compared: a group who participated in the Antioch work-study program and a comparable group of Oberlin graduates who had not participated in such a program.

Findings and Conclusions:

Statistically significant differences in favor of the work-study group were evidenced with regard to the certainty of the graduates as to their occupational choices at the time of graduation, the time of their choices, and their satisfaction with the career-planning contributions of their college program. No statistically significant differences were found between the groups with respect to their present job satisfaction and field of employment twelve to fifteen years after graduation. A consistent trend in favor of the work-study group to command higher salaries existed but it failed to meet the limits of statistical significance. Approximately three-fourths of the work-study group stated their college work was important in their career planning. Both groups stress the need for more effective counseling.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bateson (Last name), Robert (First name), Edward (Middle name)

Exact Title A STUDY OF THE GROWTH AND DEVELOPMENT OF THE TEACHER TRAINING PROGRAM FOR VOCATIONAL-INDUSTRIAL EDUCATION IN CONNECTICUT.

Degree granted Ed. D., Date 1951, No. of pages in report 339

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate the growth and development of the teacher training program for trade and industrial education in Connecticut. To ascertain the major forces, events, and personalities that have contributed to this development.

Source of data and method of study:

Data were secured through a combination of historical and normative-survey methods using records and documents of the Connecticut State Library, State Department of Education, Histories of Connecticut, Connecticut Manufacturers Association, Connecticut Department of Labor, and other sources.

Findings and Conclusions:

Poor soil caused Connecticut to turn to an industrial economy. This led to the development of highly technical skills. This changing to an industrial economy caused a dislocation of education and training. State trade schools were founded to train workers. Craftsmen were called upon to teach. Since they had no training to teach this led to the development of a teacher training program for these instructors.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bateson (Last name), Willard (First name), M. (Middle name)

Exact Title THE DETERMINATION OF STANDARDS FOR INDUSTRIAL-ARTS LABORATORIES.

Degree granted Ph. D., Date 1954, No. of pages in report 230

Granted by University of Michigan (Name of institution) Ann Arbor, Michigan (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a check list of standards for use by teachers and others in evaluating the physical facilities in the industrial arts laboratory.

Source of data and method of study:

Data were obtained by an analysis of literature pertaining to the standards for industrial arts laboratories. These were then submitted to a jury of industrial arts specialists for consideration.

Findings and Conclusions:

The work of the study resulted in a thirty page check list of standards for use in evaluating the physical facilities of the industrial arts laboratory.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bauer, Carlton, Edward
(Last name) (First name) (Middle name)

Exact Title A STUDY OF THE ARTS AND CRAFTS MOVEMENT AND OF ART NOUVEAU IN RELATION TO INDUSTRIAL ARTS DESIGN.

Degree granted Ph. D.. Date 1955, No. of pages in report 258

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate the Arts and Crafts Movement, Art Nouveau, and the Manual Training Movement in the United States with special emphasis on the period from 1890 to 1910.

Source of data and method of study:

Data were secured from periodicals, reports, catalogs, illustrations, historical and critical studies of the period. The material was treated comparatively and presented as an historical narrative.

Findings and Conclusions:

The Arts and Crafts Movement was shown to have had two purposes; to promote forthright and honest design; and to overcome the ills of the industrial age by bringing about a new social order where the worker would be free to create objects of beauty. Art Nouveau was shown to have been a movement of revolt against tradition, but, also, a movement of exploration and growth. Manual training was shown to have been mixed in its objectives. The use of arts and crafts forms with their emphasis on medieval treatment and the anti-industrial philosophy of the Arts and Crafts Movement were shown to have been unrealistic and ill suited to the objectives of manual training. Much closed integration of design with the development of projects to meet the aims of manual training was indicated as desirable especially in the training of teachers.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Baugrud (Last Name), Kim (First Name), J. (Middle Name)

Exact Title Industrial Education For The Visually Limited: The Teacher and His Approaches to Instruction in the Residential School.

Degree Granted Ed. D. Date ______ No. pages in report ______

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To (1) ascertain the personal charactersitics, background experiences, and professional preparation of industrial education teachers of the visually limited, (2) identify prevailing instructional approaches used to provide instruction to children with visual impairments enrolled in industrial subjects, and (3) ascertain the nature and extent of agreement existing between industrial education teachers and a group of specialists regarding instructional approaches. More specifically, answers to the following questions were sought: 1. What are the specific characteristics and background experiences of the industrial education teachers of the visually limited? 2. What is the nature and scope of the professional preparation of the teachers of industrial subjects for the visually limited? 3. With what professional organizations are the industrial education teachers associated? To what industrial organizations do the teachers belong? 4. What post-graduate or in-service courses do the teachers desire or reflect a need for after their initial teaching experience? 5. What specific instructional approaches are being employed by the teachers of the visually limited throughout the nation in the residential schools for the blind? 6. What is the nature and extent of agreement between industrial education teachers and specialists in the area of education for the blind regarding the instructional approaches most prevalent in teaching and those considered by the specialists to be "most important"?

Source of Data and Method of Research: Data for the study were obtained from two self-report instruments. The first instrument was completed by the industrial education teachers employed in residential schools for the blind. The second information form was completed by a recognized group of specialists in the field of education for the blind.

Findings and Conclusions: There is evidence of teacher stability and satisfaction with their teaching positions. It would appear that the professional preparation of the industrial education teacher in the area of the visually limited is inadequat The industrial education teachers, as a group, were interested in their own professional growth; however, the teachers were not interested in extending their professional growth to include the AAIB teacher rating. The industrial education teachers and a recognized group of specialists were in general agreement regarding the instructional approaches which were being utilized and those instructional approaches considered most important in the presentation of content to children who have visual impairments. Since the instructional approaches which are being utilized by the industrial education teachers are not known, teacher education programs of a preparatory or in-service nature can be developed more effectively. There is a need to clarify the type of courses which are offered in conjunction with the residential schools.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Beach (Last name), Charles (First name), Kenneth (Middle name)

Exact Title A STUDY OF CERTAIN FACTORS WHICH HAVE BEARING UPON THE PREDICTION OF SUCCESS IN SHOP COURSES IN A TECHNICAL AND INDUSTRIAL SCHOOL.

Degree granted Ph. D., Date 1941, No of pages in report 176

Granted by Cornell University (Name of institution) Ithaca, New York (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An attempt to determine some of the aptitudes, traits, or abilities that may differentiate the pupils receiving high marks from the pupils receiving low marks in courses involving mechanical abilities, in an effort to establish reliable prognostic practices regarding the admission of pupils.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Beach (Last name), Robert (First name), B. (Middle name)

Exact Title AN ANALYSIS OF THE MISSOUI INDUSTRIAL EDUCATION AWARDS PROGRAM WITH IMPLICATIONS FOR FUTURE PROGRAMS.

Degree granted Ed.D., Date 1967, No. of pages in report 269

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To assess the status of the MIEAP regarding teachers' opinions and effect on participating students.

Source of Data and Method of Study:

Data were obtained through seven separate information forms sent to teachers participating in the MIEAP, qualified students, coordinating committee members, district awards program chairmen, and undergraduate industrial teachers in five state colleges and the University of Missouri at Columbia.

Findings and Conclusions:

1. MIEAP is an effective means of promoting and upgrading industrial education among students and participating teachers.

2. It appears that a scholarship does little to attract industrial education majors.

3. There is little evidence supporting the fact that participation in a high school program influences a student's selection of an undergraduate major area of study; however, teachers who participate in awards programs have a greater influence on their student's selection of industrial teacher education as a major area of study than those who do not participate.

√

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Beacham, Herbert, Connester
(Last name) (First name) (Middle name)

Exact Title BACKGROUND AND ECONOMIC STATUS OF UNEMPLOYED NEGROES OF TAMPA, FLORIDA AND THEIR OPINIONS REGARDING TRAINING, RETRAINING, AND RELOCATION FOR WORK.

Degree granted ________ Date ________ No. of pages in report _____

Granted by University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the background and economic status of unemployed Negroes in Tampa, Florida and their opinions regarding training, retraining and relocation for work.

Source of Data and Method of Study:

Data for the study were secured from 781 personal interviews with persons in these groups: (1) unemployed Negro insurance claimants, (2) unemployed Negro youth between the ages of 16 and 19, (3) unemployed Negro welfare recipients, and (4) employment service, welfare, and training agency officials.

Findings and Conclusions:

1. Large numbers of Negroes in Tampa, Florida are unemployed because of several major reasons: (a) inadequate education, (b) lack of job skills, (c) illness disability, and old age, (d) child-care problems, and (e) disinclination to work.
2. Most of them are poverty-stricken, living in rented quarters crowded with many dependent children or relatives whom they provide either entire or partial support, mainly from welfare benefits.
3. Their work histories were irregular and erratic, many never having worked or held a full-time job.
4. It appears that the unemployed Negroes are not very resourceful in their job-hunting techniques.
5. Most of the unemployed Negroes in Tampa, Florida are not taking advantage of the training programs that are available.
6. It appears that some of the training programs are rendering overlapping and duplicate services.
7. There was an insufficient number of jobs available in which the poorly educated and untrained Negroes could secure employment.
8. The occupational training choices of the unemployed Negroes appear to be grossly out of line with the job opportunities that are locally available.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Beatty, Charles, Joseph
(Last name) (First name) (Middle name)

Exact Title MUSEUMS OF INDUSTRY: ROLE OF THE COMPANY MUSEUM AS REGARDS ITS PRESENTATION OF TECHNOLOGY, FOR USE IN INDUSTRIAL ARTS EDUCATION.

Degree Granted Ph.D. Date 1967 No. of Pages __

Granted by The Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To explore the nature of Museums of Industry, to investigate the industrial elements they contain, to determine how effectively they reflect industry, and the relationship of the usefulness of the museum as a supplement to modern Industrial Arts curriculum.

Source of Data and Method of Study:

A pilot project was conducted to obtain a first hand understanding of technical museums and to establish the scope of Museums of Industry. Visits to numerous museums and interviews with curators and industrial contributors were part of the preliminary investigation.

Findings and Conclusions:

1. Divisions of industry represented by these museums include Communication, Transportation, Power, and Service but most heavily reflect the area of Manufacture.
2. Examination of the characteristics of industry displayed reveals that the depiction of products receives primary emphasis.
3. The industrial characteristics of research and development, and tools and equipment respectively received second and third most frequent exhibition in museums.
4. The data indicates that museums of industry depict or reflect industry only to a limited degree but that their contribution is unique.
5. The educational function of these museums seldom is the result of a well developed pattern. However, in serving as institutions dedicated to storage and retrieval, they promote and contribute to learning endeavors.

61

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Beck, Burrel, Henry
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF THE ACHIEVEMENT LEVEL OF COLLEGE MEN AND WOMEN ENROLLED IN ENGINEERING DRAWING.

Degree granted Ed.D., Date 1967, No. of pages in report 181

Granted by University of Missouri, Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain if sex differences are significant factors in achievement in engineering drawing, while comparing them to students enrolled in Introduction to Education on the basis of scholastic aptitude and attitude toward engineering drawing.

Source of Data and Method of Study:

Data were obtained from 46 men and 43 women enrolled in engineering drawing and from 30 men and 45 women enrolled in Introduction to Education. Comparisons were made upon the basis of informational achievement, manipulative skill development, performance time, spatial relationships, and attitude toward engineering drawing.

Findings and Conclusions:

1. Both men and women achieved at a satisfactory level. Women did not achieve as well.
2. The manipulative skill of a woman could be increased by earlier exposure.
3. Men and women exhibited the same performance time.
4. Women were equal to men in visualizing spatial relationships.
5. Both men and women exhibited positive attitudes.
6. Students enrolled in engineering drawing held a more favorable attitude toward the course than those enrolled in Introduction to Education.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Beck (Last name), Eugene (First name), J. (Middle name)

Exact Title A Comparison of Two Approaches to Teaching Selected Elements of College Level Descriptive Geometry.

Degree Granted Ed. D. Date _____ No. pages in report _____

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain whether or not students who had received instructio in descriptive geometry by a directed problem analysis approach were able to attain significantly greater levels of competence than students who had received instruction by a more traditional approach. More specifically, the study was designed to ascertain the relative effectiveness of the two approaches to teaching descriptive geometry by a comparison of the following variables: (1) performance in the solution of graphical problems; (2) spatial perception; (3) abstract reasoning ability; (4) technical information achievement; and (5) attitude toward descriptive geometry.

Source of Data and Method of Research: This study was conducted as a controlled experiment involving two groups of students enrolled in ME 10 Descriptive Geometry in the Department of Mechanical Engineering, University of Missouri. The experimental period for the study was limited to the first eight weeks of the 1967-1968 fall semester. Analysis of results was based on data collected from a total of 52 students. The procedure involved the pretesting of groups, application of treatments, and posttesting to ascertain the effects of the treatments. Measures of retention were secured for the total research population three weeks after treatment. Since no significant differences were found to exist initially between the two groups with regard to each of four control variables, appropriate variation of the t-test were the statistical measures employed in testing the null hypotheses The control variables were scholastic aptitude, knowledge of drawing related to descriptive geometry, age, and semesters of college work completed.

Each of the 28 students who were exposed to the "directed problem analysis" approach attempted to identify and order, in writing, the constituent factors inherent in assigned graphic problems prior to attempting accurate solutions. Illustrated sketches of tentative solutions were encouraged to supplement the analysis procedure. In the "conventional approach" each of the 24 students attempted accurate solutions to the problems under consideration without the aid of a preliminary, structured written or graphical analysis.

Findings and Conclusions: An approach to teaching descriptive geometry which would contribute to the development of significantly superior graphic problem solving ability has not emerged from either of the two approaches employed in this investigation. The two approaches to teaching descriptive geometry resulted in similar gain in informational achievement; hence either approach would be equally effective in promoting the informational achievement of college level descriptive geometry students.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Beck . John , Robert
(Last name) (First name) (Middle name)

Exact Title PROGRAMED INSTRUCTION INVOLVING ACCUMULATED PRECISION ICONIC RESPONSES IN DRAFTING

Degree Granted Ed.D. Date 1964 No. of Pages 74

Granted by Indiana University Bloomington, Indiana
(Name of institution) (City and state)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The problem was an investigation into the effects and possibilities of programed instruction related to the iconic methods used in drafting.

Source of Data and Method of Study:

A teaching machine was developed and a program was written for a unit in development. Both were presented to a test group and refined. Subjects were drawn from a population of high school pupils in their second semester of beginning drafting. A control group completed four problems by the conventional method. The experimental group completed the unit using the apparatus and program. All subjects were allowed to ask questions at any time.

Findings and Conclusions:

1. The experimental group attained superior grades in problem solving and manipulative skills.
2. Time records showed that the experimental group took almost twice as long to complete a fifth problem.

3. A questionnaire revealed that the experimental group had a highly favorable attitude toward the apparatus and program and the programed method.

Indications are that learning increments are possible using programs involving accumulated precision iconic responses. Presently, however, such programs would require a judgement in terms of quantity versus quality.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bednar (Last name), Ernest (First name), G. (Middle name)

Exact Title PUBLIC SCHOOL MAINTENANCE, INSTALLATION, AND CONSTRUCTION JOBS PERFORMED BY OR UNDER THE DIRECTION OF INDUSTRIAL ARTS TEACHERS.

Degree granted Ed. D., Date 1955, No. of pages in report 127

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the practices of industrial arts teachers in the performance of maintenance, installation, and construction jobs for the industrial arts shop and for the school, and to obtain their opinions regarding these activities.

Source of data and method of study:

Data for the study were obtained through an information form mailed to a random sample of 1,000 industrial arts teachers in public secondary schools throughout the United States. Of the 425 information forms returned, 392 were retained and the data compiled graphically and statistically for the report.

Findings and Conclusions:

Industrial arts teachers performed more maintenance, installation, and construction jobs than they believe advisable due to the adverse influence upon their teaching effectiveness. Student help was used extensively for these jobs during class time and vacant periods. Teachers felt that the "do it yourself" movement was increasing the need for shop maintenance training on the secondary level. Shop teachers felt they needed more "time," "equipment," and "training" if expected to perform all maintenance and construction jobs which confront them, as well as extra pay for those done outside of school hours. Teacher training institutions should offer a required course in shop maintenance for their undergraduate industrial arts majors and a similar elective course for graduates in this field. It is false economy to use the industrial arts teacher's professional time for many of these jobs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Beed, Galer, W.
(Last name) (First name) (Middle name)

Exact Title GIUDELINES FOR AN INTERNSHIP PROGRAM IN INDUSTRIAL- TECHNICAL TEACHER EDUCATION.

Degree granted Ed. D., Date 1970, No. of pages in report 202

Granted by University of Arkansas Fayetteville, Arkansas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. To establish guidelines for an internship agreement in an industrial-technical teacher-education program involving the University of Arkansas and industry of the state.
2. To locate work stations for industrial-technical teacher-education interns.

Source of Data and Method of Study:

A questionnaire relative to policies and procedures for initiating and conducting internship programs was sent to all industrial-technical teacher-education departments listed in the 1967-68 Industrial Teacher Education Directory. From these replies and from a review of pertinent literature, a second questionnaire was constructed and sent out; respondent opinions were analyzed and a refined questionnaire developed and mailed to a stratified random sample of industrial concerns listed in the 1968 edition of the Directory of Arkansas Industries. In addition, a potential list of business and industrial concerns that would be interested in having interns in their plant or business has been completed.

Findings and Conclusions:

1. Evaluation of the student would be a combination of a letter grade and narrative statements by the industrial supervisor and school coordinator.
2. Seminars would be held monthly and would be conducted by a school coordinator and the industrial supervisors.
3. A report would be written once a month by the student so that both the industrial supervisor and the school coordinator would receive a copy. This would provide continuous evaluation during the entire intern program.
4. A performance examination of skills and a written examination over related materials should be required at the end of the intern program.
5. The coordinator's position should be a full time job.
6. The school coordinator should visit the intern once a month and be available for a conference with industrial supervisor as need arises.
7. Coordinator should have had both industrial and teaching experience.
8. Student should have had contact with coordinator in class and seminar so student's professional and personal characteristics are known.

66

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bekton (Last name), William (First name), E. (Middle name)

Exact Title DESIGN INSTRUCTION IN INDUSTRIAL ARTS TEACHER EDUCATION: A CURRICULUM ANALYSIS WITH OPINIONS OF EDUCATORS, INSTRUCTION SPECIALISTS, AND INDUSTRIAL DESIGNERS REGARDING CONTENT AND INSTRUCTIONAL PRACTICES.

Degree granted Ed. D., Date 1965, No. of pages in report ________

Granted by ________ (Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the reactions of industrial designers regarding content and status of instruction in industrial arts and determine the extent of agreement between disigners and educators, and instruction specialists and educators, in regard to content and instructional practices.

Source of Data and Method of Study:

Data were obtained from forms mailed to 103 design educators, 9 instruction specialists and 30 industrial designers. Data pertained to design content, instructional practices, instructional resources, participants' background, and department information.

Findings and Conclusions:

1. Seventy-nine schools offered at least one design course.

2. Sixty-one schools required at least one design course.

3. Sixteen schools offered no design courses.

4. Art, home economics, architecture, and design offered 122 design courses in 50 schools. Art offered 95.1 percent of the design courses.

5. Design educators used 75 different textbooks, 96 reference books, 50 periodicals, and 83 audio-visual resources.

6. The number of industrial arts departments will increase 65 percent during 1960-1970

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bell (Last name), Charles (First name), Lewis (Middle name)

Exact Title STATUS OF AND NEED FOR INDUSTRIAL ARTS IN THE PUBLIC SCHOOLS OF KANSAS WITH IMPLICATIONS FOR TEACHER EDUCATION.

Degree granted Ed. D., Date 1964, No. of pages in report 318

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine the status and need for industrial arts programs in the public schools of Kansas with implications for teacher education at Kansas State Teachers College of Emporia in developing an "ideal" program.

Source of Data and Method of Study:

Data were obtained from the Kansas State Department of Public Instruction and 701 industrial arts teachers in Kansas public schools, A jury of twelve industrial arts educators was used to determine the "ideal" program.

Findings and Conclusions:

1. Woodworking was over-emphasized as a General Shop acitvity.
2. Course content varies widely.
3. Industrial arts teachers are not interested in professional activities and growth.
4. Revision of the industrial arts programs to fit the "ideal" program would provide more adequate and better balanced programs.
5. The industrial arts teacher education curriculum at Kansas State Teachers College must be expanded to prepare teachers for the "ideal" program.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bell, Claude, Anderson
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF THE AMERICAN INDUSTRIAL ARTS ASSOCIATION AND THE INDUSTRIAL ARTS DIVISION OF THE AMERICAN VOCATIONAL ASSOCIATION WITH OPINIONS CONCERNING CERTAIN ISSUES IN INDUSTRIAL ARTS.

Degree granted Ed.D., Date 1964, No. of pages in report 211

Granted by University of Missouri, Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To compare the AIAA with the IA Division of the AVA and to ascertain opinions of members and certain non-members concerning some issues in industrial arts.

Source of Data and Method of Study:

Data for comparing the organizations were obtained from the files and publications of the AIAA and the AVA. An information form was used to obtain opinions of industrial educators.

Findings and Conclusions:

1. The purposes of the AIAA and the IA Division of the AVA are substantially the same.
2. There were few apparent differences between programs, program participants, or commercial exhibitors.
3. Teacher educators provide the leadership in both organizations.
4. Publications of the organizations are similar.
5. It is generally agreed that a close relationship should exist between industrial arts and vocational-industrial education.
6. Industrial arts educators do not want two organizations representing them.
7. Most industrial arts educators prefer the AIAA.

69

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Benson (Last name), Kenneth (First name), R. (Middle name)

Exact Title A MANUAL OF CRAFT ACTIVITIES FOR SUMMER PLAYGROUND LEADERS AND CAMP COUNSELORS.

Degree granted Ed. D., Date 1956, No. of pages in report ________

Granted by New York University (Name of Institution) New York City, New York (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of the investigation was to develop a manual of craft activities to be used by summer playground leaders and camp counselors.

Source of Data and Method of Study:

The survey method, together with a review of the literature on characteristics of six to fifteen year old children, was used to obtain criteria for selecting project activities from 1,004 playground leaders--counselors representing sixty-three organizational camps in the United States.

Findings and Conclusions:

Based on the criteria for selecting projects, the seventy-five projects selected from the literature and the twenty-five projects developed by the investigators were considered for possible inclusion in the manual. Selected projects were tested by camp leaders and counselors and a manual consisting of forty craft projects was developed.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Benson (Last name), M. (First name), James (Middle name)

Exact Title AN INVESTIGATION IN THE USE OF PROGRAMMED OPERATION SHEETS AS A SUPPLEMENT TO THE GROUP DEMONSTRATION IN TEACHING MANIPULATIVE OPERATION.

Degree granted Ed.D., Date 1967, No. of pages in report ____

Granted by The Pennsylvania State University (Name of institution) University Park, Pa. (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate the effectiveness of linear programmed instruction sheets in the teaching of manipulative operations. Also, the effect of technical line drawings as illustrations in each frame of programmed instruction was studied.

Source of Data and Method of Study:

Two experimental groups and a control group were compared on the basis of four criteria: 1. Amount of technical knowledge; 2. Amount of construction time required for completion of a job; 3. The amount of assistance required by the learner; and 4. The quality of the completed job.

Findings and Conclusions:

Using ananlysis of variance technique, group means were compared on each of the criterion measures. There were no significant differences among groups on the "time required to complete the job" or "quality of the completed job" variables. There were significant differences between both experimental groups and the control group on "technical knowledge," and "assistance required to complete the job."

The programmed materials utilized in this study had a positive effect in supplementing the group demonstration in the teaching of manipulative operations, although this effect was limited to two of the four variables studied. There was no difference among groups in the time required to complete the job although previous research indicated more time required for programmed instruction. Previous research had shown illustrated programmed materials superior to nonillustrated programmed materials. This was not found in this study. It was suggested that the demonstration may have: 1. Allowed the student to use the programmed instruction as a guide, thereby reducing time required and 2. Oriented the student to the operation, thus canceling out the effect of the illustrations in the programmed instruction.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Benson, Willard, A.
(Last name) (First name) (Middle name)

Exact Title MEASURABLE AND OBSERVABLE FACTORS IN THE SELECTIVE RETENTION OF DOCTORAL CANDIDATES WITH SPECIAL IMPLICATIONS FOR INDUSTRIAL EDUCATION.

Degree granted Ed. D., Date 1959, No. of pages in report 247

Granted by Wayne State University (Name of institution) Detroit, Michigan (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To identify subjective factors used in the selection of doctoral students specializing in industrial education and to evaluate statistically the objective measures used in the selection of Ed.D. students at Wayne State University.

Source of Data and Method of Study:

Graduate records at Wayne State University and personal interviews with educational leaders from nine major universities.

Findings and Conclusions:

No one pattern of selection is equally acceptable to all schools for selecting doctoral students in education. Wayne State University doctoral students who ultimately complete all degree requirements make significantly higher scores on three standardized tests than students who are unsuccessful in the doctoral program. It is possible to establish weighted values (based on past records) for each of these tests to provide maximum separation between the successful and unsuccessful groups of students.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bergengren, Roy, F., Jr.
(Last name) (First name) (Middle name)

Exact Title SOME COMPONENTS OF CURRENT LEADERSHIP IN INDUSTRIAL ARTS TEACHER EDUCATION.

Degree granted ED.d., Date 1953, No. of pages in report 162

Granted by University of Florida Gainesville, Florida
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To make an initial investigation of certain phases of leadership in industrial arts teacher education.

Source of data and method of study:

Data were secured from books and other studies, questionnaires, letters from leaders, identification of leaders by the profession, study of leaders through biographical data, and ideas contained in writings.

Findings and Conclusions:

A need exists for research and for testing the general education concept of industrial arts. The successful communication of ideas sets the leader apart from the average industrial arts teacher educator. There is a definite need for leaders who will be closely identified with the group in terms of objectives and recognition. Experience is an important component of leadership in industrial arts teacher education.

73

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Bergman (Last name), Kenneth (First name), H. (Middle name)

Exact Title COMPARISONS OF THREE TEACHING METHODS OF INTRODUCTORY COLLEGE ELECTRICITY.

Degree granted Ed.D., Date 1963, No. of pages in report 90

Granted by Colorado State College (Name of institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To determine whether or not students who had been randomly divided into a teaching machine group, Group A, a programmed textbook group, Group B, and a regular textbook group, Group C, would show a significant difference in the amount of electrical knowledge gained from the time of entrance into the basic college electrical course until the completion of the course.

Source of Data and Method of Study:

Data were obtained on 101 college students enrolled at Ball State Teachers College, Muncie, Indiana, during the winter and spring quarters of the 1962-63 academic year. All 101 students completed the course, Industrial Arts, 193.1, Electricity, Transportation, and Power. Information supplied by the college was the scale score from the School and College Ability Test, Form 1A (SCAT-1A) Verbal, subtest section. Tests constructed by the researcher were used to collect additional data. These tests included the Pretest in Electricity, the Midterm Test in Electricity, and the Final Test in Electricity.

Findings and Conclusions:

1. There were no significant difference among the scores of the students in Group A, Group B, Group C on the SCAT-1A, Verbal, subtest section.
2. There were no significant differences among the scores of the students in Group A, Group B, or Group C on the Pretest in Electricity.
3. There were no significant differences among the scores of the students of Group A, Group B, and Group C on the combined Midterm and Final Tests in Electricity.
4. The significance of regression was found to have an F ratio of 9.33 which is significant at the 0.005 level of confidence.
5. The adjusted mean of the three groups indicated that Group A had the largest mean when the experiment was completed.

74

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bergvin, (Last name), Paul (First name), Emile (Middle name)

Exact Title AN EVALUATION OF CORPORATION-INDEPENDENT AND PUBLIC SCHOOL-CORPORATION CO-OPERATIVE APPRENTICE SCHOOLS.

Degree granted Ed.D., Date 1945, No. of pages in report 186

Granted by Indiana University (Name of institution) Bloomington, Ind. (City, State)

Where Available: Microfilm ( ) Micrifiche( ) E.R.I.C. ( )

Purpose of Study:

A study which attempts to develop a set of standards which may be used to evaluate apprentice training programs. These standards were derived from the literature on apprenticeship and from interviews and correspondence with directors of apprenticeship throughout the United States.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Bertrand (Last name), Clint (First name), A. (Middle name)

Exact Title AN EXPERIMENTAL DEVELOPMENT OF PROGRAMMED INSTRUCTIONAL MATERIALS FOR THE VOCATIONAL EDUCATION DEPARTMENT OF THE TEXAS DEPARTMENT OF CORRECTIONS.

Degree granted Ed. D. ,Date 1964 ,No. of pages in report ___

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate the feasibility for developing and using programmed vocational instruction for inmates of correctional institutions.

Source of Data and Method of Study:

A purposive sample of fourteen inmates at a Texas Correctional Institution were taught the principles of writing programmed material which were subsequently tested experimentally by (a) using a random sample of inmates and (b) measuring performance on a comprehensive test of achievement.

Findings and Conclusions:

The findings indicated that while there were no significant differences among the various types of programmed institutional materials developed (i.e. linear, branching, teaching machine, etc.), interaction effects suggest that teaching machines may have a Hawthorne effect which facilitates performance. It was concluded that inmates of correctional institutions can be taught to develop effective programmed instructional materials for certain vocational areas.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bibb (Last name), Herman (First name), Leon (Middle name)

Exact Title PRIVATE TRADE SCHOOLS OPERATING IN MISSOURI FROM 1944 THROUGH 1951.

Degree granted Ed.D., Date 1952, No. of pages in report 210

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To survey the private trade schools of Missouri approved for veteran training, for the period 1944 through 1951.

Source of data and method of study:

Data for the study were secured from records on file in the office of the Veterans' and Adult Education Section, State Department of Education, Jefferson City Missouri, from information blanks sent to graduates of private trade schools and the employers of graduates, and from the House Select Committee Report, House of Representatives, 81st Congress, 2nd Session.

Findings and Conclusions:

Fifty-five private trade schools operated in Missouri from 1944 through 1951, enrolling predominantly veterans of World War II. These trade schools had many shortcomings, some stemming from profit motive and others from sudden expansion of new and old schools. Some unqualified schools were granted approvals for operation, though with development and application of standards for approval, the qualifications of private trade schools improved. The private trade schools did not always have consideration for the supply and demand for trained workers in some of the trades. It appeared that the training provided by the private trade schools during the period from 1944 through 1951 was costly to individuals and to tax-payers. However, the placement of private trade school graduates in jobs for which they were trained appeared high. The occupational success of these graduates who were employed in the trade for which they were trained compared favorably with other employees who had been in similar trades for approximately the same length of time.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bicknell, William, Clarence

Exact Title CONSTRUCTIONAL ACTIVITIES IN THE ELEMENTARY SCHOOLS--THEIR DEVELOPMENT AND USE.

Degree granted Ed.D., Date 1942 No. of pages in report 208

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study concerning the European and American background, use, types, purposes, organization, methods of presentation, and administration of constructional activities in the elementary school.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Biedler, John, Samuel
(Last name) (First name) (Middle name)

Exact Title THE RECREATIONAL FUNCTION OF INDUSTRIAL ARTS.

Degree granted Ph. D., Date 1958, No. of pages in report 157

Granted by The Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To establish and spell out a position for industrial arts in recreation.

Source of Data and Method of Study:

Documentary research was used to define (1) recreation in contemporary life and (2) industrial arts education, and to clarify the role of each. A criterion for measuring man's recreational activities was developed with reference to the involvement of industrial arts. This was used to support the hypothesis that industrial arts activities are involved in some of man's recreational activities and to reveal content and direction for expanding industrial arts education in recreation.

Findings and Conclusions:

Recreation can take place during work or leisure; industrial arts training can guide an individual in recognizing recreational opportunities and in increasing his skills in making use of these opportunities. Growth through self-expression characterizes industrial arts, a form of creativity which adds meaningful contributions to the advancement of the culture. The recreational function should be stressed at all levels of education.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Biggam, William, Russell
(Last name) (First name) (Middle name)

Exact Title INSTRUCTIONAL AIDS IN INDUSTRIAL ARTS EDUCATION.

Degree granted Ed. D., Date 1958, No. of pages in report 137

Granted by Bradley University Peoria, Illinois
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the importance and need for training in the selection and use of instructional aids in the preservice and inservice professional education of industrial arts teachers, to study the methods provided for such training, and to suggest college course content in instructional aids.

Source of Data and Method of Study:

Questionnaires on practices and opinions were sent to 142 teacher trainers, 138 supervisors, and 239 secondary school teachers of industrial arts. Related literature on audiovisual education and industrial arts education was reviewed.

Findings and Conclusions:

Forty-two colleges and universities provide special courses in instructional aids which are offered largely on an elective basis and most frequently at the undergraduate level. Opinions of industrial arts educators: Graduates are not sufficiently prepared to utilize the variety of instructional aids; a need exists for training on the professional level; training is best provided by special courses; courses should be practical; and training should be broad and comprehensive. A wide variety of aids are used by secondary school industrial arts teachers in varying frequency, but conventional aids are used most often. Industrial arts supervisors use a great variety of aids in inservice training and encourage greater uses of these aids on the part of shop teachers.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Billings, Donn, ____
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL COOPERATIVE EDUCATION AND TRAINING FOR NEW YORK STATE HIGH SCHOOLS.

Degree granted Ed.D., Date 1953, No. of pages in report 327

Granted by New York University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate the cooperative programs for the purpose of formulating a comprehensive statement of recommended practices for particular application to training in industrial occupations through New York State high schools.

Source of Data and Method of Study:

Data were secured through a questionnaire, correspondence, and educational bulletins from thirty-eight selected states. Observations and interviews were conducted in thirteen states. Developments in New York State derived from data reported annually concerning program operation from 1949 to 1952.

Findings and Conclusions:

Results of the study are indicated in 208 itemized recommendations for use in New York State. The recommendations are classified under program organization and development and program operation and conduct.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bing, (Last name), Kenneth (First name), L. (Middle name)

Exact Title SUCCESS OF STUDENTS PRESENTING PRACTICAL ARTS CREDIT FOR ENTRANCE TO THE UNIVERSITY OF MISSOURI.

Degree granted Ed.D., Date 1941, No. of pages in report 222

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study of practical arts and college admission officials. The relative value of practical arts vs. academic subjects as preparation for college are compared.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Birnbach (Last name), Sidney (First name), B. (Middle name)

Exact Title A COMPARATIVE STUDY OF ACCIDENT-REPEATER AND ACCIDENT-FREE PUPILS.

Degree granted Ed. D., Date 1948, No. of pages in report 113

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To explore measurable psychophysical aspects existing among students who have repeated accidents and those who do not have accidents.

Source of data and method of study:

Selected children in one school who were considered accident repeaters and another group who were accident free. Tests and examinations were administered to find differences in adjustment, attitude toward safety, gymnastic ability, and physical fitness.

Findings and Conclusions:

Accident-free groups excelled in knowledge of safety, growth in personal and social relationships, and were generally better adjusted. The pupils in the accident repeater group excelled only in greater crude strength and superior gymnastic ability.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Black, Ralph, Ross
(Last name) (First name) (Middle name)

Exact Title ADMINISTRATIVE PROBLEMS OF PRODUCTION IN THE HIGH SCHOOL PRINT SHOP.

Degree granted Ed. D., Date 1959, No. of pages in report 197

Granted by Bradley University, Peoria, Illinois
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To survey present practices regarding production work in high school print shops and to ascertain methods of alleviating the situation where production is considered a major problem.

Source of Data and Method of Study:

Questionnaires sent to approximately 500 high school printing instructors throughout the United States. Questions were designed primarily to elicit information concerning the role of production work in the graphic arts programs of the schools. Comparisons were made between those who considered production a major problem and those who did not.

Findings and Conclusions:

Production work for other departments of the school was found to be almost a universal practice in high school print shops, but only about one-third of the instructors considered it a major problem in the shop. Instructors were almost unanimous in their approval of the use of production work in their industrial arts classes, provided it could be properly controlled. Lack of a workable plan for controlling production appeared to be instrumental in making it a problem in many shops. This condition seemed to be due principally to the inability of the instructor to organize effectively for production work, or to a lack of cooperation between the administrator and the printing instructor.

84

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Blackburn (Last name), Samual (First name), Alfred (Middle name)

Exact Title THE DEVELOPMENT OF VOCATIONAL EDUCATION IN TEXAS.

Degree granted Ph. D., Date 1930, No. of pages in report 306

Granted by University of Texas (Name of institution), Austin, Texas (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A critical study of the development and nature of vocational education in Texas. Legislation and statistics bearing upon the educational activities up to 1930 are discussed and curricula are compared. Possible relationships with respect to sociological data are considered.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Blakeley, Thomas, A.

Exact Title EVALUATION OF THE ADMINISTRATION OF THE EDUCATION PROGRAM AT SAN QUENTIN PRISON.

Degree granted Ed.D., Date 1949 No. of pages in report 297

Granted by University of California at Berkeley (Name of institution) Berkeley, California (City, State)

Where available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To criticize and evaluate certain aspects of the administration of the educational program at San Quentin prison and to make recommendations.

Source of data and method of study:

The type of research used in this study is evaluation of current practice, setting up criteria, surveying current practice in the areas defined, and evaluation of current practices in terms of criteria.

Findings and Conclusions:

Resocializations and attention to the individual are prime factors in a modern prison organization. The San Quentin educational program is closely allied with the administrative structure of the College of Marin. Recommend that a lay board of control (Board of Education of the Department of Corrections) be elected to control education in penal institutions. Duties of the administrative officers are not clearly defined. Prison officals are inconsistent in their cooperation with College of Marin and have failed to realize that their program is a cooperative one. Personnel should be selected on the bases of training, experience, ability, and personal fitness.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Bledsoe (Last name), Harry (First name), James (Middle name)

Exact Title A COMPARISON OF THE EDUCATIONAL DEVELOPMENT OF DIVERSIFIED COOPERATIVE EDUCATION STUDENTS AND NON-DIVERSIFIED COOPERATIVE EDUCATION STUDENTS IN SELECTED INDIANA HIGH SCHOOLS.

Degree granted Ph. D. ,Date 1968 ,No. of pages in report 147

Granted by Purdue University (Name of Institution) Lafayette, Indiana (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the difference between the educational development of students (DCE) who had participated in State approved Diversified Cooperative Education programs and that of students (NDCE) who had not participated in cooperative vocational education programs in selected public secondary schools in Indiana. Specifically, the study was an attempt to answer the question: "Do the Diversified Cooperative Education experiences, by their nature and scope, afford the participants opportunities for general educational development comparable to that attained by their peers in a regular or non-cooperative vocational sequence of courses?"

Source of Data and Method of Study:

Subjects (DCE-95 and NDCE-95) for the study were full-time secondary school students. Senior class rosters were employed to stratify subjects according to graduating class within each school. Each subject was then matched within school and graduating class according to sex, age, achievement as measured by the pretest Composite Score on Tests 1-8 of the Iowa Tests of Educational Development (ITED), and attendance during the school year the pretest was administered.

Findings and Conclusions:

1. State approved DCE programs afforded participants an opportunity for general educational development comparable to that offered NDCE students. Therefore, the general educational development of DCE students was not impeded through participation.
2. Rejection of DCE on the basis that it deprives the participant of an opportunity for general educational development is neither justified or realistic.
3. There was something inherent in the DCE experience which compensated for the lack of exposure to certian general education courses. These factors appeared to work as well for DCE students toward general educational development as the array of courses to which NDCE students were subjected worked for them.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Block, Murray, H.

Exact Title AN EVALUATION AND RECOMMENDATIONS FOR THE ADMINISTRATION OF THE TECHNICAL PROGRAM OF THE EVENING AND EXTENSION DIVISION OF THE INSTITUTE OF APPLIED ARTS AND SCIENCES AT NEW YORK CITY.

Degree granted Ed.D., Date 1953 No. of pages in report 280

Granted by Columbia University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To review policies and procedures, to determine how the program fits the purposes of the school, and to make recommendations for improvement.

Source of data and method of study:

Data were obtained from readings, visits, and investigations to develop a background for interpretation; investigation of the different aspects of the administration, and then interpretation of the existing program.

Findings and Conclusions:

Over eighty recommendations made with a view to improving administrative practices, improving the programs offered, making the best use of facilities, and relating the program to its purposes. When the institute is converted into a community college, the Evening and Extension Division will have to take the lead in relating the entire program to the life of the community.

88

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Blum, Robert, E.
(Last name) (First name) (Middle name)

Exact Title DEVELOPMENT AND STANDARDIZATION OF AN ACHIEVEMENT TEST FOR PLACING COLLEGE STUDENTS IN GENERAL DRAFTING COURSES.

Degree granted Ed. D. ,Date 1965 ,No. of pages in report ____________

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to develop and standardize a valid and reliable achievement test for general drafting suitable for use in advanced placement of students.

Source of Data and Method of Study:

A nation wide survey of 119 college drafting instructors was used to identify the basic concepts of and content for the development of a 195 item multiple choice achievement test. A panel of experts was used to judge the face validity, clarity and value of each item. A stratified sample of 3,657 college drafting students was used as a basis for developing norms for the test and its various subtests.

Findings and Conclusions:

The findings support the hypothesis that it is possible to develop and standardize a valid and reliable general drafting achievement test. The conclusions of the study were (a) the length of the test was satisfactory, (b) the effect of teacher competency is negligible for two of the four categories of students used in the study, (c) the test had both face and concurrent validity and (d) predictive validity seemed evident since test scores have a positive relationship to grades in drafting courses.

89

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bohn (Last name), Ralph (First name), Carl (Middle name)

Exact Title AN EVALUATION OF THE EDUCATIONAL PROGRAM FOR STUDENTS FROM FOREIGN COUNTRIES: EMPHASIS UPON ORIENTATION PROCEDURES, INDIVIDUAL PROBLEMS, AND PSYCHOLOGICAL VARIABLES.

Degree granted Ed. D., Date 1957, No. of pages in report 351

Granted by Wayne State University (Name of institution) Detroit, Michigan (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

This study was designed as a pilot investigation into the effectiveness of the foreign student program directed by the Technical Training Section of the U.S. Office of Education and financed by the "Point Four" Program.

Source of Data and Method of Study:

The evaluative methods consisted of personally studying a pilot group of 36 students, including interviews and a questionnaire completed anonymously by the students, and the use of the following instruments: Language tests developed by the Committee on Diagnostic Reading Tests, Inc., California Test of Mental Maturity, an attitude scale based on Stephenson's Q-technique, a questionnaire to faculty advisors, and further information from institutions attended by the students.

Findings and Conclusions:

A weakness in language ability was evident from the language tests given the group and was corroborated by the faculty advisors and by the students themselves. Because of this language deficiency, the California Test of Mental Maturity provided little or no information concerning the native ability or intelligence of the students. Their attitudes tended to be favorable toward the United States and toward permissive rather than restrictive education. The grades of the foreign students were generally equal to or better than the grades of American students. The major problems encountered while in the United States were language difficulty, housing during the summer seminar, difficulty in adjusting to American food and to the different climatic conditions.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Bonde (Last name), Robert (First name), Gibson (Middle name)

Exact Title AN EVALUATION OF SELECTED ELEMENTARY SCHOOL INDUSTRIAL ARTS HAND TOOLS--GRADE I.

Degree granted Ed.D. Date 1964 No. of pages in report 85

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To evaluate selected industrial arts tools in order to determine the specific kinds, sizes, and weights that are most suitable for first grade children of various physical builds and sexes to use in construction activities.

Source of Data and Method of Study:

Seven tool categories were evaluated in the study: (1) hammers, (2) panel saws, (3) coping saws, (4) bit braces, (5) hand drills, (6) planes, and (7) sawhorse workbenches. Nineteen specific tools were selected from within these seven categories on the basis of data obtained from a questionnaire survey to the members of the American Council for Elementary School Industrial Arts. These tools were then subjected to controlled manipulative use with sixty first grade children who had been selected according to sex and physical build. During the experiment, a total of 960 individual evaluations were conducted and recorded. The results of the tool operations were evaluated with apparatus designed and built for the experiment.

Findings and Conclusions:

Of the tools selected for the experiment, the seven, ten, and thirteen ounce claw hammers; the sixteen, eighteen, and twenty inch panel saws; the wire and rigid frame coping saws; the eight, ten, and twelve inch bit braces; and the fourteen, sixteen, and eighteen inch sawhorse workbenches were within the capabilities of the children. However, it is recommended on the basis of trends that developed during the study that for purposes of greater efficiency, economy, and utilization that the thirteen ounce hammer, the twenty inch panel saw, the rigid frame coping saw, the ten inch bit brace, and the sixteen inch sawhorse workbench be utilized for first grade educational construction activities.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Boone, James, L.
(Last name) (First name) (Middle name)

Exact Title THE RELATIONSHIP BETWEEN SELECTED HIGH SCHOOL SUBJECTS AND ACHIEVEMENT BY ENGINEERING STUDENTS.

Degree granted Ed. D., Date 1966, No. of pages in report

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine if a significant relationship exists between the number and kinds of high school elective subjects presented for engineering college admission and first-year achievement of engineering students.

Source of Data and Method of Study:

The subjects consisted of 411 high school graduates who enrolled as freshmen in Texas A&M University. Information about the number of high school credits in five instructional areas was obtained, together with information about five other control variables dealing with high school performance and/or ability. The relationship among variables was determined by partial and multiple correction analysis.

Findings and Conclusions:

The findings of the study indicated that of the five variables dealing with high school course credits, only the amount of credit obtained in foreign language proved to have a significant relationship with first year achievement in an engineering program. The correlations for credits in industrial arts, mathematics, science and social science were not significant when adjusted for other control factors. Of the five control variables, only high school GPA and entrance examination scores were found to be related to college achievement. It was concluded that, high school students with above average grades should diversify their choices of elective high school courses and secondly, that admission requirements for college should be based on high school GPA and entrance test scores.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Borri, Robert, ____
(Last name) (First name) (Middle name)

Exact Title THE ORGANIZATION, CONTENT, AND TEACHING OF GENERAL INDUSTRIAL ARTS IN SELECTED AMERICAN SECONDARY SCHOOLS.

Degree granted Ed. D., Date 1942, No. of pages in report ____

Granted by Pennsylvania State College (Name of institution) State College, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An historical study of the general industrial arts (general shop) movement. It considers the origin, philosophy, growth, and contributions of the general industrial arts program. Trends concerning the organization, content, and teaching of general industrial arts are included.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bowers, Victor, Lee
(Last name) (First name) (Middle name)

Exact Title AMERICAN HOUSING AND INDUSTRIAL ARTS EDUCATION.

Degree granted Ph.D., Date 1941, No. of pages in report 314

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the housing industry: its structure, processes, procedures, and researches. Basic material is analyzed to show the role which industrial arts can play in orienting the public to appreciation of proper housing.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bowman, Ernest, Lavern
(Last name) (First name) (Middle name)

Exact Title CONTENT AND METHOD IN THE TEACHING OF BLUEPRINT READING FOR FIVE SELECTED BUILDING TRADES.

Degree granted Ph. D., Date 1932, No. of pages in report 282

Granted by Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the content and method for teaching blueprint reading in carpentry, bricklaying, electrical wiring, plumbing, and steamfitting. It derives principles involved and applies the principles in selecting desired methods and content.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bowman (Last name), James (First name), E. (Middle name)

Exact Title A STUDY OF THE BASIC MATHEMATICAL SKILLS NEEDED TO TEACH INDUSTRIAL ARTS IN THE PUBLIC SCHOOLS.

Degree granted Ed. D., Date 1958, No. of pages in report 194

Granted by Michigan State University (Name of institution) East Lansing, Michigan (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the mathematical skills needed to be a successful industrial teacher in the public schools: as those needed in the required college courses, and those used while teaching industrial arts.

Source of Data and Method of Study:

Surveys from 162 colleges, 100 professors of drafting, 63 professors of electronics or electricity, 105 professors of metalwork, 101 professors of woodwork, 49 authors of industrial arts textbooks and 189 outstanding industrial arts teachers representing 40 States. Percentage responses were used in comparing the desirable courses in mathematics.

Findings and Conclusions:

College industrial arts professors recommended these courses, in order: elementary algebra, plane geometry, trigonometry, college algebra, solid geometry, intermediate algebra, and analytic geometry. The first five courses were recommended by over 48 percent of the professors. More than one-half of the outstanding industrial arts teachers included in this study had taken elementary algebra, plane geometry, intermediate algebra, solid geometry, college algebra, and trigonometry.

The authors of industrial arts textbooks recommended that the following courses be required for students who use their books: plane geometry--80 percent; solid geometry--65 percent; elementary algebra--54 percent; trigonometry--44 percent.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Bowser (Last name), James (First name), Albert (Middle name)

Exact Title Curriculum and Other Implications Resulting From a Study of the and Drop-Outs of the Terminal Vocational Industrial Education Program at the Norfolk Division of Virginia State College 1950-1954.

Degree Granted Ed. D. Date 1960 No. pages in report 199

Granted By The Pennsylvania State University (Name of Institution) University Park, Penn. (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To determine how well former vocational trade students of the Norfolk Division of Virginia State College have adjusted to employment and also to determine what implications there were for curriculum adjustment.

Source of Data and Method of Research: Data were obtained from school records, interviews with 107 graduates, mailed instruments from 124 drop-outs, instruments from Negro Land-Grant Colleges, and pertinent literature. Comparisons were made between graduates employed in the trade fields for which they had been trained and those graduates not employed in fields for which they had been trained.

Findings and Conclusions: There were no significant differences between the two groups of graduates with respect to age, marital status, veteran's status, additional education, factors influencing vocational choice, and previous educational level. Early first job placement in trade fields for which they had been trained seemed to be an important factor in holding vocational trade graduates in their fields.

Principal job referral sources were friends, relatives, civil service, and own efforts. Neither the State employment service nor the school was very effective as a job referral source. Procedures found to be helpful by Negro Land-Grant Colleges in placing vocational trade graduates were: (1) Contact with employers, (2) internship programs, (3) alumni assistance, (4) advisory committees.

Limited practical experience was the greatest single obstacle to placement of graduates. Other obstacles were racial employment policies of employers and lack of jobs. Voluntary job changes by graduates tended to show a desire to improve economic and social status.

Limited program offerings and low economic status of enrollees in the vocational trades program were the underlying causes of most drop-outs.

Vocational trades programs in the local area, including apprenticeship, were inadequate to meet present and anticipated needs of the community. Recommendations indicated a need for a trade coordinator, an internship program, refinement of the recruitment program, better trade guidance, and a continuous followup program.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Box, Sr. (Last Name), Marshall (First Name), Ray (Middle Name)

Exact Title Development and Standardization of an Achievement Test in General Woodworking for Grades Nine Through Twelve in the State of Texas.

Degree granted Ed. D, Date Summer 1967 No. of pages in report 238

Granted by Colorado State College (Name of institution) Greeley, Colo. (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study: The construction and standardization of an achievement test designed to measure woodworking knowledge, understanding, and application acquired by selected senior high school students with general woodworking experience.

Source of data and method of study: The general woodworking test was administered to 2059 students in 65 high schools throughout Texas in April, 1967. The results were analyzed for interpretation. Items were selected on the basis of the units they tested and the importance of the units as judged by an 80 teacher jury. The general validity was established by using the suggested major units in Bulletin 615, Principles and Standards for Accrediting Elementary and Secondary Schools and Description of Approved Courses, Grades 7-12.

Findings and Conclusions: The standardized achievement test in general woodworking based on the standards in Bulletin 615 and state-adopted textbooks is valid and reliable. It can be used on a statewide basis to evaluate uniform achievement of secondary high school students with one year of general woodworking experience. The general woodworking test norms can and should be used by local teachers to support their course offerings. The procedure used in the formulation of this test can be used to develop tests for other areas of industrial arts in Texas.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brandon (Last name), George (First name), Louis (Middle name)

Exact Title AN APPRAISAL OF THE PREPARATION OF INDUSTRIAL EDUCATION SUPERVISORS IN OHIO COLLEGES FOR TEACHER EDUCATION.

Degree granted Ph. D., Date 1952, No. of pages in report 326

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To analyze the preparation of industrial education supervisors taking graduate courses in Ohio colleges for teacher education and to appraise then the preparation in terms of functions which local supervisors actually perform and should perform in the judgment of specialists.

Source of data and method of study:

Data were obtained by a survey of educational literature, previous studies, and three check lists distributed to a nation-wide jury of fifty teacher education-supervision specialists, local Ohio industrial education supervisors, and heads of industrial education departments in Ohio colleges for teacher education.

Findings and Conclusions:

Preparation in present graduate industrial education courses is primarily intended for supervisory activities in the administration of industrial education. Seventy per cent of all highest emphasis instruction is directed toward the functions of administration. The supervisor's activities in in-service education, utilization of group processes, and teacher education of beginning trade teachers are generally neglected or minimized in graduate courses. Course provisions are especially lacking for all of the supervisor's activities in education of beginning trade teachers and the in-service education of the staff.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brasted (Last name), F. (First name), Kenneth (Middle name)

Exact Title A STUDY OF THE EXTENT, NATURE, AND PROBLEMS OF THE RELATIONSHIPS BETWEEN INDUSTRY AND EDUCATION IN CONNECTICUT DURING THE FIRST HALF OF THE TWENTIETH CENTURY.

Degree granted Ph. D., Date 1953, No. of pages in report 275

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To identify and study the extent, nature and problems involved in the relationship between industry and education in the state of Connecticut since 1900, and to indicate those implications which may be of importance to industry and education in their future relationships.

Source of data and method of study:

Data were secured through a check list of forty-eight education-industry cooperative activities, a questionnaire using the Secretary to the State Board of Education, minutes and correspondence files of trade associations, and interviews with educational and industrial leaders of the state.

Findings and Conclusions:

No major specific problems in the relationships between industry and education in Connecticut were discovered. However, the greatest need was the establishment of a better two-way communication between the two groups. Industry had accepted a definite responsibliity to assist education.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Brenckle, Authur, Gordon
(Last name) (First name) (Middle name)

Exact Title STANDARDS USED IN THE SELECTION OF INDUSTRIAL EDUCATION INSTRUCTORS IN PUBLIC JUNIOR COLLEGES.

Degree granted Ed.D., Date 1968 No. of pages in report 152

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To determine qualifications essential to industrial education teachers as indicated by directors of industrial education in public junior colleges, and state directors of vocational education. Factors considered were those criteria upon which teachers are hired. Secondly, this study determined whether industrial arts teacher preparation institutions can adequately prepare vocational, technical, and industrial arts teachers for cummunity junior colleges.

Source of Data and Method of Study:

Questionnaires were used to gain two basic types of information. State directors of vocational education supplied information concerning the various state vocational certification standards. Directors of industrial education programs in selected public junior colleges supplied information concerning their programs and qualifications they deisre in teachers of these subjects.

Findings and Conclusions:

Vocational certification standards vary greatly among the states included in this study.

Terminology concerning industrial arts education, technical education, and vocational education varies greatly among the various state departments, the public junior colleges, and the four-year teacher training institutions.

In order to provide quality vocational and technical education for the rapidly increasing number of post high school students who are entering the junior colleges. the number of qualified junior college teachers must be increased.

Directors of industrial education in junior colleges indicated that teachers with preparation in industrial arts education can qualify to teach technical and vocational education if they have job experience required for state vocational certification

According to junior college directors of industrial education, state vocational certification indicates a satisfactory level of the skills representative of industr

Most states do not have established proficiency tests for certifying teachers in the various areas of vocational and technical education.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brenholtz (Last name), Harold (First name), Robert (Middle name)

Exact Title AN ANALYSIS OF CERTAIN FACTORS ASSOCIATED WITH CHARTERED NON-ACCREDITED SCHOOLS IN MISSOURI.

Degree granted Ed. D., Date 1957, No. of pages in report 175

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To analyze the structure and activities of the unaccredited private schools of Missouri chartered since 1925 under the laws relating to nonprofit benevolent, religious, scientific, educational, and miscellaneous associations.

Source of Data and Method of Study:

Five separate sources--from the charters of the 136 corporations considered, from 33 corporations by means of information forms and personal contact, from the files of the Veterans and Adult Education Section of the State Department of Education, from the files of the Better Business Bureau of Kansas City, and from an analysis of the catalogs and other literature published by some of the corporations.

Findings and Conclusions:

The procedure for granting charters for nonprofit private schools has not been restrictive or discriminating enough to prevent the chartering of sub-standard or fraudulent schools. Institutions with low enrollment and few teachers have offered and awarded various degrees, including nine different types of "Doctor's" degrees, some of them awarded for correspondence study only. Minimum standards need to be established concerning the quantity and quality of work required for the awarding of degrees by nonprofit private schools. These schools should be required to meet proper standards regarding the adequacy of physical facilities and the competency of instructional staff.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brenner, (Last name), Charles (First name), Julius (Middle name)

Exact Title AN EXPERIMENTAL COMPARISON OF DIRECT-DETAILED VERSUS DIRECTED DISCOVERY LABORATORY EXERCISES IN TEACHING SELECTED ELEMENTS OF BASIC ELECTRICITY.

Degree granted Ed.D., Date 1968, No. of pages in report 241

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relative effectiveness of the directed-discovery and direct-detailed approaches to teaching basic electricity by a comparison of problem solving, technical achievement, attitude, and retention.

Source of Data and Method of Study:

Two groups of three sections of IE 124-208 Basic Electricity at Stout State University were given one type of instruction. The control variables were then tested. Each student was pretested for comparison before instruction began.

Findings and Conclusions:

1. The direct discovery approach was significantly superior to the direct-detailed approach with regard to problem solving.

2. Low ability students were also helped in problem solving by the directed-discovery approach.

3. There was no significant difference in the approach for teaching technical information, student attitude, or student retention.

4. The directed-discovery approach is superior to the direct-detailed approach in teaching electronics.

103

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brigham, Elden, L.
(Last name) (First name) (Middle name)

Exact Title THE RELATIVE EFFECTIVENESS OF INCIDENTAL GUIDANCE AND A PROGRAM OF INTENSIFIED EDUCATION AND VOCATIONAL GUIDANCE ON THE ADJUSTMENT AND VOCATIONAL SUCCESS OF A CLASS OF FLINT, MICHIGAN HIGH SCHOOL STUDENTS FIVE YEARS AFTER THE GRADUATION OF THE CLASS.

Degree granted Ph.D., Date 1950, No. of pages in report 49

Granted by University of Michigan Ann Arbor, Michigan
(Name of Institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine what differences, if any, were to be found in the educational and vocational adjustment and in the vocational success of the two halves of the same high school class when one-half is given only general or incidental guidance and the other half is given a carefully planned and administered program of intensified guidance.

Source of data and method of study:

The class was canvassed by means of questionnaires. Sixty per cent or 145 experimental and 133 of control group responded. An interview was used with questionnaire. Both utilized rating scales.

Findings and Conclusions:

Intensive guidance was influential in bringing about the following results: A closer relationship between vocation and measured interests on the part of the experimental men and women, more stable curricula and a higher percentage of graduation from high school of the experimental subjects, plans to attain and the actual attainment by experimental subjects both of advanced training at the college, or university level, and of higher occupational levels. While the obtained differences are quite consistently in favor of the experimental groups, in the opinion of the author himself, the case in general for the relative effectiveness of intensive over incidental guidance is not proved.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Broadhurst (Last name), John (First name), Christian (Middle name)

Exact Title A DIFFERENTIAL PREDICTION OF SUCCESS IN VOCATIONAL-TECHNICAL AND VOCATIONAL-INDUSTRIAL COURSES IN A VOCATIONAL HIGH SCHOOL.

Degree granted Ph. D., Date 1949, No of pages in report 112

Granted by New York University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To provide by comparing age, 5 test series, and past grades in 6 courses with later school achievement, an objective basis for predicting success in vocational-industrial and vocational-technical courses in the Vocational and Technical High School, Bayonne, N. J.

Source of Data and Method of Study:

Student age, scores in tests, and past grades in 5 common tenth-year subjects were correlated individually and in combination with weighted averages of achievement in the eleventh-year school work to determine the best combination of independent variables for predictive purposes. One hundred and forty-five and 69 vocational-industrial and vocational-technical students were involved.

Findings and Conclusions:

Past grades in common subjects (and especially physics, shop and drafting grades) were superior predictive instruments for both types of courses, although in varying degree. The best test for predictive purposes was the Purdue Test of Technical Information in Industrial Mathematics. Recommendations were made for lowering slightly the original criteria for admission to vocational-technical courses.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - NAITTE - AIAA

Author Buxton (Last name), Robert (First name), Edward (Middle name)

Exact Title The Identification of Physical Science Principles for Industrial Arts Metalworking Content.

Degree Granted Ed. D. Date 1960 No. pages in report

Granted By University of Maryland (Name of Institution) College Park, Maryland (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain basic principles of chemistry and physics involved in selected processes of the metalworking industries and to develop subject matter for the industrial arts metalworking program consistent with relationships between scientific principles and industrial processes, with suggestions appropriate to the industrial arts program at the secondary level.

Source of Data and Method of Research: A list of 249 principles of physics and chemistry by Wise, and another of 125 principles, mainly metallurgical derived by the writer, were utilized in the study. Ten industrial processes were selected from classifications by Begeman and by Vance. An abridgement of each process was written. An analysis of each process was made in an attempt to identify the scientific principles. The symbol of each principle found to be involved was inserted in context at the point of involvement. All materials were submitted to a group of 12 consultants in science, science education, and engineering. Approved principles were tabulated and analyzed to determine the number and kinds of principles involved in each process.

Findings and Conclusions: A total of 197 principles from all the lists was found to have 483 applications in the 10 processes. Principles related to heat, the properties of energy and matter, the chemical nature of matter, and the structure of matter were found to be involved in all the processes. The abridged processes with the integrated principles may serve as subject matter from which content may be drawn for a given course, once the objectives of the course have been determined.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Byrom, John, Marvin
(Last name) (First name) (Middle name)

Exact Title THE DEVELOPMENT OF A SCALE OF PHOTOGRAPHS FOR THE APPRAISAL OF LEARNING INFLUENCES IN INDUSTRIAL ARTS SHOPS.

Degree granted Ed. D., Date 1957, No. of pages in report 173

Granted by Pennsylvania State University (Name of institution) University Park, Pennsylvania (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a scale of photographs for appraisal of learning influences in industrial arts shops, and to develop evaluative criteria to parallel the scale.

Source of Data and Method of Study:

The evaluative criteria were developed from existing information, experimentation, and refinement of data by leaders in the field. The scale of photographs was developed by taking many photographs in 49 industrial arts shops. The photographs were separated into 20 factors and submitted to judges for ranking in 4 degrees of effectiveness. The photographs for the scale were then selected by statistical calculations. A reviewing committee was used for cross-validation.

Findings and Conclusions: Photographs can be used to show conditions, situations, and happenings in industrial arts shops that are significant in depicting the quality of certain learning influences. A scale of photographs can be developed which may be used for the appraisal of learning influences in industrial arts shops.

The methods used in this study suggest a practice of collecting evidence that can be easily stored or filed for future use by educators.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Cain (Last name), Cecil (First name), Richard (Middle name)

Exact Title AN ANALYSIS OF THE INDUSTRIAL ARTS TEACHING POSITION AND TEACHER PREPARATION.

Degree granted Ed. D., Date 1958, No. of pages in report 207

Granted by Indiana University (Name of institution) Bloomington, Indiana (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To analyze the instructional and related requirements of the industrial arts teaching positions now held by persons who graduated from Fort Hays Kansas State College, Hays; Kansas State Teachers College, Emporia; and Kansas State Teachers College, Pittsburg; and to compare the requirements with the preparation these teachers received.

Source of Data and Method of Study:

Responses to 21 major items included in an interview guidesheet were obtained during personal interviews with 135 subjects. Information concerning certification and credit hours of preparation was obtained from the files of the State Department of Public Instruction. The data were compiled and analyzed under the following headings: (a) teacher qualification, training, and activities; (b) instructional program, scope, and area combinations; (c) shop equipment; and (d) ranking of objectives.

Findings and Conclusions:

(1) Wide variations in the preparation of the teachers, both in scope and in number of hours of credit in the various areas of industrial arts, indicated a diversity of requirements among the three teacher training institutions as to the type and amount of training considered desirable in the preparation of industrial arts teachers;

(2) The predominance of drafting, metalwork, and woodwork in the program of course offerings at each of the grade levels pointed to a strong emphasis upon the traditional areas of instruction;

(3) Courses in administration and supervision apparently were not required as a part of the preparation of industrial arts teachers;

(4) There were 71 instances, involving more than one-third of the group, in which the teachers had assumed instructional responsibilities in subject-matter fields for which they lacked the minimum subject preparation stipulated for the class of school in which they taught. This seemed to indicate that formal preparation was subject to variable interpretation by the State Board of Education in the determination of the teacher's qualifications in the industrial arts teaching field.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Cambria (Last name), Sophia (First name), T. (Middle name)

Exact Title YOUTH IN PHILADELPHIA LABOR MARKET: A STUDY OF THE VOCATIONAL PROBLEMS OF YOUNG WORKERS AND RELATED VOCATIONAL SERVICES.

Degree granted ________ Date 1945, No. of pages in report ________

Granted by Bryn Mawr College (Name of institution) Bryn Mawr, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

109

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Cameron (Last name), Walter (First name), Audry (Middle name)

Exact Title REMOTE IN-SERVICE VOCATIONAL-TECHNICAL TEACHER EDUCATION FOR BEGINNING TEACHERS.

Degree granted Ph. D. Date 1969 No. of pages in report

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the effectiveness of three remote techniques of teacher education for providing in-service education on three selected teaching skills. The specific objectives of the study were to assess the effectiveness of three remote feedback techniques in regard to improvement in teaching performance on three selected teaching skills, to determine from among the three treatment groups, the level of expressed teacher satisfaction, and to determine the feasibility of the use of remote techniques for in-service teacher education.

Source of Data and Method of Study:

Thirty-nine teachers from the areas of health occupations education, trade and industrial education, and technical education in Colorado were randomly selected and assigned to one of three equal size treatment groups. After being pretested (videotaped teaching a five minute lesson), all participants were mailed an instructional model on the teaching skill of introducing a lesson and nine illunstration models (three for each of the three skills). Each teacher was instructed to view the instructional model as many times as necessary to learn the skill and to practice the skill by teaching a five-minute lesson to four students. The session was videotaped and the recording was replayed and critiqued by the teacher. Each teacher mailed his videotape to the teacher educator. Posttests were then made of the participants who had completed the program.

Findings and Conclusions:

An analysis of covariance computed on the data revealed no statistically significant differences among the three treatment groups in regard to teaching performance on the composite of the three teaching skills or on any single teaching skill. An analysis of variance on the satisfaction data showed no differnce among the three groups on the expressed level of satisfaction with the three techniques used. All groups improved their posttest teaching performance over their pretest teaching performances for the composite of the three skills.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Campbell (Last name), Robert (First name), Asa (Middle name)

Exact Title STUDENT ATTITUDE TOWARD MANDATORY INDUSTRIAL ARTS COMPARED WITH SELECTED VARIABLES IN THE TEACHING SITUATION

Degree granted Ed. D., Date 1961 No. of pages in report 173

Granted by The Pennsylvania State University (Name of institution) University Park, Pennsylvania (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. To measure student attitude toward mandatory industrial arts courses in junior high school.
2. To ascertain the extent to which certain selected variables in the teaching situation are associated with student attitudes toward industrial arts.

Source of Data and Method of Study:

The study was conducted by : reviewing the literature; identifying or constructing appropriate instruments to measure the selected variables; constructing a valid and reliable attitude scale; selecting 36 schools which had industrial arts programs rated from above average to below average; personally visiting all schools to administer the scale; and statistically analyzing the data to draw conclusions regarding the hypothesis.

Findings and Conclusions:

-The individual scores of the "Student Attitude Toward Industrial Arts" scale ranged from a high of 176 (highest possible) to a low of 9. A total of 582 usable student attitude scales was obtained from the main study.
-Seven variables considered were: 1. physical conditions of the lab 2. the instructional program 3. methods and management used in the lab 4. the professional rating of the teacher 5. the teacher's philosophy of education 6. amount of experience or time the student had in industrial arts 7. the teacher's estimation of the school administration's attitude toward industrial arts. None of the coefficients of correlation proved to be statistically significant at the commonly accepted levels of confidence. This may not necessarily mean that some of these variables are unimportant.
-An exceptionally valid and reliable instrument was developed to measure student attitude toward junior high industrial arts courses.
-The hypothesis was rejected for it was found that not one of the seven selected variables had a strong enough relationship with student attitude to be statistically significant.
-The selected variables which were closely related to the teacher had the highest correlation.

111

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Campion, Howard, Arthur
(Last name) (First name) (Middle name)

Exact Title AN EXPERIMENTAL DETERMINATION OF CRITERIA FOR THE ESTABLISHMENT OF NEW VOCATIONAL COURSES.

Degree granted Ed.D., Date 1941, No. of pages in report 218

Granted by University of Southern California Los Angeles, California
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study to establish a set of items or criteria that might serve as a check on, or measure of, the advisability of adding an instructional program in a designated occupational school or a vocational department in a secondary school of the public school system.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Cantor, Robert, Lloyd
(Last name) (First name) (Middle name)

Exact Title A STUDY OF THE INDUSTRY AND FIELD OF PLASTICS AS A CREATIVE MEDIUM FOR AVOCATIONAL AND VOCATIONAL USES OF THE LAYMAN.

Degree granted Ph. D., Date 1952, No. of pages in report 260

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To study the field of plastics in the light of utilization of industrial methods, materials, processes, and equipment by the layman with emphasis on classifying, clarifying, and synthesizing the available technical and engineering source materials; to provide creative, vocational, and avocational outlets for the layman with specially created plastics molding equipment, and to devise new methods for plastic utilization in today's schools which would be more rewarding and representative of this field of industry.

Source of data and method of study:

Data were secured through extensive consultation of technical literature and visits to one hundred-fifty industrial plants. These data were utilized in devising minimal equipment and verified by seventeen industrial experts. The equipment thus designed was actually produced.

Findings and Conclusions:

Plastics minimal equipment could be used to keep down small lot production costs, for pilot runs, sounding out the market, experimental and development work, industrial design studios, vocational orientation courses for counseling purposes, short trade and terminal courses, elementary and secondary schools, college courses, occupational therapy, testing instruments, new avenues for artists and architects, industrial sales, visual aids, demonstration of plastic materials, hobbies, and adult education. It further provides for simpler processing demanded by the plastics industry, development of consumer literacy, and avenues for self-realization, development of skills, and appreciation of industrial products.

1/3

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Capron, John, Hugh
(Last name) (First name) (Middle name)

Exact Title WOOD LAMINATING AND ITS IMPLICATIONS FOR INDUSTRIAL ARTS.

Degree granted Ed. D., Date 1955, No. of pages in report 161

Granted by University of Florida Gainesville, Florida
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

__Purpose of Study:__

To compile information about wood laminating so the average industrial arts teacher can acquire first hand information about it.

__Source of data and method of study:__

Data were secured from reports, articles, unpublished material, and correspondence with commercial wood laminaters.

__Findings and Conclusions:__

Elementary experiences in wood laminating do not require specialized, expensive equipment or highly developed skills.

114

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Casner, Daniel,
(Last name) (First name) (Middle name)

Exact Title CERTAIN FACTORS ASSOCIATED WITH SUCCESS AND FAILURE IN PERSONAL ADJUSTMENT COUNSELING.

Degree granted Ph.D., Date 1950, No. of pages in report 208

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To search for factors related to the outcome of personal adjustment counseling with veterans.

Source of data and method of study:

Total population of 159 consecutive referrals studied in relation to degree of improvement.

Findings and Conclusions:

Lack of generally accepted definition of "success" in psychotherapeutic counseling need not stand in way of needed research. Competent judges can reach considerable agreement in their evaluation of counseling outcomes. Natural setting of an investigation can determine meterials to be used. The counseling situation resembles a learning situation.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Cassidy, Edward, A.
(Last name) (First name) Middle name)

Exact Title A METHOD FOR DEVELOPING A WRITTEN TEST TO MEASURE ESSENTIAL ELEMENTS IN TRADE ABILITY.

Degree granted Ph. D., Date 1953, No of pages in report 87

Granted by University of Pittsburgh Pittsburgh, Pennsylvania
(Name of institution) (city, state)

Where Available: Micorfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To develop a method that will identify essential elements in trade ability from which valid factors for a written test intended' to measure trade ability can be produced.

Source of Data and Method of Study:

Data were obtained from research documents prepared by industrial concerns, trade associations, and research organizations devoted to trade work, text books, training documents from plant and vocational schools, trade magazines, and literature prepared for journeyman use in the trade.

Findings and Conclusions:

An inventory of master trade operations that are essential in journeyman work experience was developed. The basic structural units in the machine shop trade were ascertained to be lathe, milling machine, grinding machine, boring machine, drilling machine, shaper, and planer. To these were added general bench work units of fitting, assembly, erecting, layout, heat treatment, inspection, and toolmaking. The pattern of equipment units in vocational school installations was identified. The relationships between the essential elements in trade ability were established.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Chamberlain, , Duane , Glen
(Last name) (First name) (Middle name)

Exact Title FACTORS RELATING TO TEACHING OF PRACTICAL ARTS ACTIVITIES IN THE ELEMENTARY SCHOOLS OF MICHIGAN

Degree granted Ph.D. , Date 1954 , No. of pages in report 166

Granted by University of Michigan Ann Arbor, Michigan
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To isolate and investigate factors relating to teaching of practical arts activities in self-contained classrooms of the elementary schools of Michigan; to assist classroom teachers, administrators, and teacher trainers; to locate and eliminate or alleviate factors which inhibit utilization of practical arts work in the elementary grades, and to locate and promote factors which contribute to effective use of practical arts in the elementary grades.

Source of Data and Method of Study:

Data were obtained from a survey of elementary teachers who were not using practical arts activities and from elementary teachers who were using practical arts activities

Findings and Conclusions:

Industrial arts in the elementary school is usually taught by classroom teachers who have more general professional and industrial arts college training. Personal characteristics, teaching load, a rigid daily program of studies, and classroom size do not appear to affect the role of industrial arts in the elementary grades. Attitudes of superiors, parents, press, noise from work, and classroom acoustics play a role influencing the inclusion or exclusion of industrial arts. Teachers using these activities usually recieve higher salaries. Costs of instructional supplies are greater when industrial arts is included.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Chambliss, Kinneth, M.
(Last name) (First name) (Middle name)

Exact Title STAFF NEEDS FOR PLANNING IN-SERVICE PROGRAMS IN ADULT TRADE-TECHNICAL INSTITUTES.

Degree granted D. Ed., Date 1966, No. of pages in report ______

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine the needs of professional personnel for assistance as a basis for planning programs of in-service education for the technical institutes and industrial education centers of North Carolina.

Source of Data and Method of Study:

A normative survey was conducted of all trade-technical instructors, administrators and teachers of related subject matter in twenty-six post-secondary technical institutes. The questionnaire obtained responses relative to (a) in-service training needs and (b) personal characteristics-backgrounds of each respondant.

Findings and Conclusions:

The findings supported the conclusion that the three groups of educational personnel surveyed have many common in-service training needs as well as in-service needs which were quite different. The training needs of trade technical teachers and teachers of related subjects had the following commonalities: (1) effective supervision, (2) practical philosophy of education for work and (3) clerical help. On the other hand, in-service training needs which were specific to administrators were quite different from either group of teachers. As a result of the findings, recommendations were made for improving the in-service training programs in technical institutes for both the teachers in the schools as well as the administrators of the school.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Charconchai, Ruang,
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL ARTS IN THE SECONDARY SCHOOLS IN THAILAND

Degree granted Ph. D. Date 1963 No. of pages in report 292

Granted by The Ohio State University Columbus, Ohio
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To study the status of industrial arts in the secondary schools in Thailand by comparing a postulated program withthe existing one. To determine if most of these problems or inadequacies exist because the program was designed without taking the principles and conditions of Thailand into account.

Source of Data and Method of Study:

1. Professional literature was searched to obtain the general principles of industrial arts.
2. The Thai settings in which industrial arts was offered were analyzed to find factors which influenced the industrial arts principle.
3. A new industrial arts program was then postulated according to the principles and factors identified.
4. Reports, letters of inquiry, questionnaires were employed to describe the existing program and its 1961-62 status.

Findings and Conclusions:

The following recommendations were made for the Thai Ministry of Education:

1. Establish a division of industrial arts in the Department of General Education and appoint a person with experience and preparation in industrial arts as its director.
2. Define industrial arts as a general education area and use only the term "autasahakam-slip" to designate industrial arts.
3. Replace the present industrial arts objectives with the postulated ones.
4. Require the junior secondary pupils to take at least two industrial arts courses per year.
5. Offer all industrial arts courses in the secondary school as free electives.
6. Replace the present industrial arts courses with the transitional courses and strive toward attaining the postulated ones eventually.
7. Expand the existing three-year program for preparing industrial arts teachers; establish pilot model programs throughout the country; provide mobile shops as a temporary measure; and issue plans for all industrial arts areas and for all types of laboratory organizations.

119

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Chavous (Last name), Arthur (First name), Melton (Middle name)

Exact Title INDUSTRIAL EDUCATION FOR NEGROES IN OHIO

Degree granted Ph.D., Date 1945, No. of pages in report 176

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Examines the general environment in which Negroes live in Ohio and recommends practices and policies in the field of technical and industrial education which may operate to limit some of the inequalities placed on Negroes.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Christoffel (Last name), Frederick (First name), W. (Middle name)

Exact Title A STUDENT TEACHING HANDBOOK FOR COOPERATING TEACHERS IN THE AREA OF INDUSTRIAL ARTS.

Degree granted Ed. D., Date 1960, No. of pages in report

Granted by New York University (Name of Institution) New York City, New York (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a student teaching handbook for industrial arts supervisors of student teachers.

Source of Data and Method of Study:

The questionnaire survey technique was used to assess the opinions of student teachers, first year teachers, and supervising or cooperating teachers in four Eastern States. The data were analyzed, interpreted and incorporated into a "student teachers handbook."

Findings and Conclusions:

The results of the study led to the conclusion that industrial arts cooperating teachers can effectively use a student teaching handbook which is designed specifically for their needs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Chatfield (Last name), William (First name), D. (Middle name)

Exact Title AN EVALUATION OF THE CURRICULUM FOR INDUSTRIAL ARTS TEACHER EDUCATION IN CONNECTICUT.

Degree granted Ph. D., Date 1955, No. of pages in report 171

Granted by University of Connecticut (Name of institution) Storrs, Connecticut (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop recommendations to improve the industrial arts teacher education curriculum at the Teachers College of Connecticut.

Source of data and method of study:

Data were obtained from 90 teachers of industrial arts who were graduated from the Teachers College of Connecticut between the years 1947 and 1952 inclusive. Additional data were obtained from 30 supervisors of industrial arts, secondary school principals, and industrial arts teacher trainers.

Findings and Conclusions:

A majority of the graduates were satisfied with over half of their undergraduate curricular experiences. Twenty curricular experiences which were declared essential to the curriculum by the supervisors were rated as in need of enrichment by the teachers: methods of storing projects and supplies; power distribution in a shop; ordering tools, supplies, and equipment, understanding industrial methods; selecting reference materials; studying occupational information; better understanding of individual differences; helping students adapt to the community; student-teacher planning; development of evaluation plans; techniques of using group dynamics and correlating work with other departments; drafting; designing; chalkboard techniques; guidance; audio-visual materials; physics; shop mathematics; and freehand sketching.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Clark, Donald, Lee
(Last name) (First name) (Middle name)

Exact Title ACTIVITY AND LEARNING: AN EXPERIMENTAL COMPARISON TO DETERMINE THE EFFICACY OF OVERT VERSUS COVERT ACTIVITY ON THE LEARNING OF AN INDUSTRIAL PRAXIOLOGICAL CONCEPT.

Degree granted Ph. D., Date 1967 No. of pages in report

Granted by The Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To help in the formulation of a sounder theory about the efficacy of overt versus covert activity of the learning of an industrial praxiological concept.

Source of Data and Method of Study:

Two methods of instruction were used in teaching an industrial praxiological concept to 142 junior high school boys in seven separate industrial arts classes. Each class was given the same basic presentation via video tape. This was followed by one-half of the students in each class conceptualizing about how to "do" the activity while the other one-half actually practiced the activity. Evaluation of each method of instruction was achieved by means of analyzing the performance of each group on a performance test.

Findings and Conclusions:

1. The findings revealed that the student who had had the overt practice out-performed the student who had only conceptualized about the activity. This finding was substantiated on overall achievement as well as on part schores.
2. A further finding that substantiated the need for and value of practice was that as the group which had conceptualized completed successive units--each unit being a form of practice -- their mean achievemnet became more nearly that of the practice-performance group.
3. Of seven ability factors, each had a positive effect in that the higher the individual student ability, the higher his achievement on the praxiological concept.
4. I.Q. did not appear as a significant factor.
5. The overall findings of the study indicated that in teaching a praxiological concept, the emphasis should be placed on overt activity.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Brooker (Last name), George (First name), Ray (Middle name)

Exact Title PROPOSED CONTENT OF AGRICULTRUAL MACHINERY TECHNOLOGY CURRICULUM FOR FOUR-YEAR COLLEGES AND UNIVERSITIES.

Degree granted Ed.D. Date July 10, 1970 No. of pages in report 80

Granted by University of Arkansas (Name of institution) Fayetteville, Arkansas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was twofold. First, to structure a curriculum that was most beneficial to the Agricultural Machinery Technician and second, to locate the most desireable content for the specific agricultural machinery courses.

Source of Data and Method of Study:

Data were secured from the 92 percent return of the 50 questionnaires mailed to agricultural machinery manufacturers in the United States.

Findings and Conclusions:

There was significant agreement among the Industrial Consultants concerning both the selection of college courses and selection of content for specific agricultural machinery courses. Courses in such related technical areas as, automotive and diesel engines, hydraulics and pneumatics, and metals and electricity were indicated to be of considerable value, as were many other courses to a lesser degree. The findings are displayed in the study in both constructed curriculum course form.

124

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brooking (Last name), Walter (First name), Jesse (Middle name)

Exact Title A CRITICAL ANALYSIS OF THE PROBLEMS IN PROVIDING VOCATIONAL-TECHNICAL EDUCATION IN EXISTING INSTITUTIONS, ESPECIALLY JUNIOR COLLEGES.

Degree granted Ed.D., Date 1948, No. of pages in report 611

Granted by University of Texas (Name of institution) Austin, Texas (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A description of curriculum, program, faculty, administration, and equipment of a work-study pre-engineering collegiate institution and its implications for industrial education within junior colleges.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Brooks (Last name), Weston (First name), T. (Middle name)

Exact Title AN EXPERIMENTAL ANALYSIS OF THE EFFECTIVENESS OF OVERHEAD TRANSPARENCIES ON LEARNING AND RETENTION (IN SELECTED UNITS) IN BEGINNING WOODWORKING.

Degree granted Ed.D. ,Date 1964' ,No. of pages in report

Granted by Texas A &M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the effects on learning and retention in beginning woodworking when conventional methods of teaching are supplemented with overhead transparencies.

Source of Data and Method of Study:

Three hundred and twenty (320) eighth and ninth grade students were randomly assigned experimental and control groups according to ability in one of eight particiapting schools. The experimental and control treatments were identical for four units of instruction with the exception of the overhead transparencies. Effectiveness was measured in terms of initial learning, retention and attitudes.

Findings and Conclusions:

The findings support the conlcusions that the use of overhead transparencies improves initial learning and retention. Lower ability students who received the experimental treatment did almost as well as high ability students who received the control treatment. All teachers were able to use overhead transparencies effectively. A general recommendation suggests that the overhead transparencies would be a significant instructional vehicle for the field of industrial arts.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brophy (Last name), John (First name), M. (Middle name)

Exact Title EDUCATION AND TRAINING IN THE INDUSTRIES OF UPSTATE NEW YORK.

Degree granted Ph.D., Date 1947, No. of pages in report 300

Granted by Cornell University (Name of institution) Ithaca, New York (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the administration, organization, and operation of plant training programs in upstate New York, with emphasis on plants having over one thousand employees.

Source of Data and Method of Study:

1. Interviews
2. Questionnaires distributed to 157 plants.

Findings and Conclusions:

1. Organized training programs were provided in 8/10 firms--the rest had programs but suspended or curtailed them.
2. Firms have training opportunities for 1) foremen, etc., 2) skilled workers, 3) semi-skilled workers, 4) unskilled workers, and less opportunities for executive and management, professional exployees or clerical/accounting.
3. Plants less than 1000 exployees make less provisions for training than bigger ones.
4. The typical program is on-the-job training.
5. Ratio of employed apprentices to journeymen varies.
6. Administration and operation of training programs rests in the hands of a too diverse and preoccupied a group.
7. Little agreement for who is responsible for a program.
8. Rank and file workers seldom have opportunity to participate in establishment of training policy.
9. Almost 7/10 plants inform training staff of impending changes in policies and practices which affect the trainees.
10. Management believes that the lack of ability and time to train are the most important barriers to training of workers by supervisors, foremen, and lead-men
11. Management justifies training of new workers.
12. Incentives to take training is left to the immediate supervisor.
13. Instructional materials and equipment are frequently available for study.
14. Progress of trainees is watched more carefully than the effectiveness of instructors.
15. Little cooperation between plants and vocation/technical schools as far as working together.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Brotherton, William, A.
(Last name) (First name) (Middle name)

Exact Title ENGINEERING TECHNOLOGY EDUCATION IN MEMPHIS, TENNESSSEE: A STUDY OF NEEDS.

Degree granted Ed. D., Date 1964, No. of pages in report 138

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To determine the feasibility of the establishment of a two-year program of engineering technology education as an instructional department of Memphis State University. Specifically this study was undertaken to determine: (1) The employment needs of Memphis business and industry with respect to those occupations which require the post-secondary engineering technology type of education for entry or retraining. (2) The extent to which these needs were being met by existing educational facilities. (3) What additional facilities for engineering technology education, if any, were needed im Memphis. (4) Whether or not such a program would be compatible with the purposes and program of Memphis State University.

Source of Data and Method of Study:

The methods and procedures necessary in the compilation of data for this study included a personal interview survey of engineering personnel in selected Memphis industries, a study of various education programs in the city, a review of literature, and a comparison of purposes of engineering technology education with those of higher education.

Findings and Conclusions:

1. There was both an immediate and projected need for engineering technician employees in Memphis.
2. The engineering technician employee need existed because there were insufficient facilities in operation to educate the number and type of technicians required.
3. One training facility of the type described in this study could fill the need that was found.
4. The typical engineering technology program should be operated to satisfy the educational needs of the student desiring this type of program and the employment needs of local industry desiring employees with such training.
5. Continuous contact with the engineering profession and community industry would reflect changing technician employee needs.
6. The nature and purposes of higher education and those of engineering technology education relate in such a way that the latter could function effectively and contribute to the overall service of a public, tax-supported, four-year institution of higher education.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA -- NAITTE

Author Brown (Last name), B. (First name), Wesley (Middle name)

Exact Title Characteristic Differences of Trade School Students and Their Bearing on Post-School Occupational Plans.

Degree Granted Ed. D. Date 1960 No. pages in report 192

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain differences among day-trade students who intended to enter the occupation for which they were being trained, students who intended to enter an occupation other than the one for which they were being trained, and students who had made no occupational plans.

Source of Data and Method of Research: Data concerning 378 day-trade seniors were obtained from an information form, the Strong Vocational Interest Inventory, the Ohio Psychological Examination, and grade-point averages in 37 schools in Missouri. Principals, counselors, and day-trade instructors of these seniors were interviewed to obtain selection factors used in enrolling these students.

Findings and Conclusions: Of the 378 participating seniors, 125 intended to enter the occupation for which they were being trained, 126 intended to enter an occupation other than the one for which they were being trained, and 127 had made no occupational choice. The most important factor, other than advice of individuals, influencing seniors to enroll in the day-trade program, was experience in industrial arts. Seniors who planned to enter the occupation for which they were being trained were likely to be enrolled in large, urban-area day-trade programs. Principals, counselors, and day-trade instructors seemed to be unaware of local, State, or National labor market needs, or the importance of such needs in enrolling students in the programs.

3

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

A Author Brown, George, Curtis
(Last name) (First name) (Middle name)

Exact Title GUIDE FOR CURRICULUM REVISION IN PRINTING FOR SCHOOLS BEYOND THE HIGH SCHOOL.

Degree granted Ph. D., Date 1963, No. of pages in report 179

Granted by Southern Illinois University, Carbondale, Illinois
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To aid schools studying curriculum problems in their consideration of printing as a potential course offering.

Source of Data and Method of Study:

Data collected through questionnaires from 135 schools including all schools beyond high school. Information was used to develop a set of recommendations, which were then reviewed by a jury of experts to enable a school to determine how well printing courses will fit into the offerings of the school.

Findings and Conclusions:

1. Printing courses have been offered in some schools for more than 60 years. Several schools have begun offerings since 1960.
2. Junior colleges, technical institutes, four-year colleges and universities all offer printing education in some form.
3. Amounts invested in equipment and machinery range from $5,000 to more than $400,000.
4. Schools which have discontinued printing programs give these reasons:
   A. Inability to find a teacher.
   B. Low enrollment.
   C. Change in the philosophy of the school.
   D. Program crowded out by other classes.

Schools should study (1) the need, (2) cost factors, (3) suitability for specific schools, (4) ease of introduction, (5) outcomes of printing education and (6) potential for growth before installing printing in the curriculum.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE & AIAA - NAITTE

Author Brown, George, J.
(Last name) (First name) (Middle name)

Exact Title Manipulative Operations and Electronic Equipment Needed in Industrial Teacher Education Based on Industrial Practices.

Degree Granted Ed. D. Date 1960 No. pages in report 196

Granted By University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain what manipulative operations the electrical worker should be able to perform in the areas of electricity and electronics; to find out what type and size of electronic equipment is needed for this purpose; and to compare the above-mentioned manipulative operations and equipment with operations taught and equipment used in industrial teacher education.

Source of Data and Method of Research: Data were secured through information forms obtained from representatives of 65 electronics manufacturing companies, 46 repairmen and technicians employed in servicing electronics equipment and devices, and 70 college instructors who teach in industrial teacher education departments offering two or more courses in electricity and electronics.

Findings and Conclusions: Service manuals and books seem to be inappropriate as textbooks in courses designed for prospective industrial arts teachers. There seem to be few differences in the sizes or types of equipment used in electronics manufacturing and that used in electronics servicing. Types and sizes of electronic test equipment used by electronics production workers and repairmen appear to resemble closely the types and sizes used in courses taught by college respondents.

In contrast with industrial practices, electrical courses offered in industrial education departments for prospective teachers tend to include manipulative operations which are limited chiefly to electricity. There appears to be a rather close agreement between the extent to which various operations occurred in work performed by electronics production workers and repairmen, and the extent to which the same operations were found in courses taught by college respondents.

131

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brown, (Last name), Milton (First name), T. (Middle name)

Exact Title OCCUPATIONAL STUDIES OF SELECTED SKILLED TRADES IN THE PHILADELPHIA AREA.

Degree granted Ed.D., Date 1948, No. of pages in report 158

Granted by University of Pennsylvania (Name of institution) Philadelphia, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study of trends and occupational outlook in 50 selected skilled trades for the Philadelphia area. Local and national trends are studied from 1910 to 1948.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brown, Nathan,
(Last name) (First name) (Middle name)

Exact Title A HISTORY OF THE DEVELOPMENT OF EDUCATION FOR THE APPAREL INDUSTRY IN NEW YORK CITY.

Degree granted Ph. D., Date 1954, No. of pages in report 361

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate a quarter century of cooperation between the apparel industry and public education in New York City.

Source of data and method of study:

Data were secured from the files of correspondence and documents of the Advisory Board for Vocational Education; the Central High School of Needle Trades; records of Max Meyer, Chairman of the Needle-craft Educational Commission; the minute book of the Educational Foundation for the apparel industry; and official documents of the Board of Education and the Board of Estimate of the city of New York.

Findings and Conclusions:

The two major outcomes of the program described in this study were a new and model school building and a unique pattern of education on a junior college level.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brown (Last name), Robert (First name), Dean (Middle name)

Exact Title INDUSTRIAL ARTS COMPETENCIES NEEDED BY ELEMENTARY TEACHERS.

Degree granted Ph.D., Date 1955, No. of pages in report 329

Granted by Univerisity of Minnesota (Name of institution) Minneapolis, Minnesota (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain as accurately as possible the industrial arts competencies which are needed by elementary teachers.

Source of Data and Method of Study:

Data were gathered from a selected sample of St. Paul, Minnesota, elementary teachers through the use of the interview--re-interview technique and from random samples of Minnesota graded school and ungraded school elementary teachers through the use of a mailed inventory checklist. The t-test of significance and Bartlett's test of the homogeneity of variance were used in the analysis of the data.

Findings and Conclusions:

Elementary teachers should develop specific competencies within each of three broad industrial arts areas. The areas are: woodwork, the graphic arts, and the crafts. Specific skills and knowledges to be learned in each area are detailed in the thesis. Each elementary teacher should possess a great deal of general industrial arts knowledge. She should know the objectives of elementary industrial arts, the ways in which the program can best be carried on, how industrial arts activities can be integrated with the work of the teaching unit, and how to demonstrate manipulative skills in such a way that learning is facilitated. Each elementary teacher should be familiar with a wide variety of industrial arts activities which can be profitably carried on at the elementary level, and she should know about numerous specific activities included within each general type.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brown (Last name), Walter (First name), C. (Middle name)

Exact Title HIRING, ADVANCEMENT, AND TRAINING PRACTICES IN SELECTED ST. LOUIS AREA INDUSTRIES.

Degree granted Ed.D., Date 1954, No. of pages in report 204

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of the study was to obtain information relative to the hiring, advancement, and training practices in industrial-type jobs in selected St. Louis area industries and to ascertain how education relates to these practices.

Source of Data and Method of Study:

Data for the study were obtained from the Missouri Division of Employment Security; management associations in the area; interviews with personnel men and training officials in the selected industries; record forms and labor-management contracts; and literature pertinent to the study. The study included 46 industries in 15 major industrial groups in the St. Louis area.

Findings and Conclusions:

All industries were unionized except one. The union shop type of union security occurred more frequently than any other. The mean minimum hiring age of the industries was 18.5. Over half the industries had a practice of hiring "all races"; however, fewer industries preferred to do so. Over one-half the industries hired handicapped workers where they could do the work. Four-fifths of the industries had no minimum formal education requirement for applicants. The majority of industries gave preference to applicants who had had special training with approximately one-fourth making it a requirement for employment on certain jobs. Seniority was the chief factor in promotion of workers, and low seniority was the primary factor in determining the order in which workers were laid off. In promotion of workers to supervisory positions, "qualification of the worker" was the controlling factor. Slightly less than half the industries rated their workers on merit. In less than half the industries, workers could transfer from one department or job family to another in present grade or higher. In 41 of the 46 industries, industrial training of one or more types was provided industrial workers by either the industry, the union, or both.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brown, William, Edwin
(Last name) (First name) (Middle name)

Exact Title A RESEARCH PROJECT DESIGNED TO EVALUATE THE USE OF AN AUTOMATED TEACHING DEVICE IN THE INSTRUCTION OF ENGINEERING GRAPHICS.

Degree granted Ph. D., Date 1964, No. of pages in report 140

Granted by The Ohio State University Columbus, Ohio

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To evaluate the educational significance of an automated teaching device used to supplement the instructor in the teaching of engineering graphics.

Source of Data and Method of Study:

The Engineering Graphic course used in this research project was taught in a double class period of one hour and foty-eight minutes, three days a week. Two sections of Engineering Graphics were used--the control group, which recieved the traditional lecture-laboratory method, and the experimental group, which received all new material from the automated teaching device. Both groups were taught by the investigator.

Findings and Conclusions:

In the statistical analysis of the data, the F test was employed to check the hypothesis that the groups were drawn from a common population. It was found by approximate interpolation that an F score of 2.18 would be significant at the .05 level, the differnece in the variability of the difference scores of the group was not considered to be significant. The major hypothesis were analyzed by "t" test. The null hypothesis was not tenable at the .05 level and it was rejected.

It was concluded that there is a significant difference between the traditional lecture-laboratory method and the use of the automated taaching device in student achievement of engineering graphics when both methods were employed.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brownrigg, Jerry, Roy
(Last name) (First name) (Middle name)

Exact Title READING ABILITIES OF COLLEGE DRAFTING STUDENTS COMPARED WITH READABILITY OF DRAFTING TEXTBOOKS AND WITH INFORMATIONAL ACHIEVEMENT IN DRAFTING.

Degree graned Ed. D., Date 1962, No. of pages in report 220

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To compare reading ability of beginning college drafting students with readability levels of common drafting textbooks and with informational achievement in drafting.

Source of Data and Method of Study:

Data for the study were gathered through tests and through application of the Dale-Chall Formula to the selected textbooks.

Findings and Conclusions:

Reading ability of college drafting books range from grade eight to grade sixteen plus. The most difficult sections in drafting books are above the students level in the cases studied.

General rather than technical vocabulary was the leading cause of difficulty. To be readable by the majority of the students, a textbook should have a readability of less than the thirteenth grade, since 59.87 percent of the drafting students had measured abilities equal to the thirteenth grade.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bruce (Last name), Phillip (First name), Lee (Middle name)

Exact Title STATUS, CONTENT, AND APPRAISAL OF INDUSTRIAL ARTS COURSES FOR ELEMENTARY TEACHER EDUCATION IN PUBLIC HIGH EDUCATIONAL INSTITUTIONS.

Degree granted Ed.D., Date 1964, No. of pages in report 261

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the status and content of industrial arts courses for elementary teachers in public colleges and universities throughout the United States, and to appraise the adequacy of the content reported.

Source of Data and Method of Study:

Data for this study were obtained from three sources: (1) information form mailed to industrial education department chairmen concerning status of industrial arts courses for elementary teachers, (2) information form mailed to instructors to secure data concerning the content of these courses, and (3) survey of research studies, texts, and publications relevant to the study.

Findings and Conclusions:

1. Ninety-four of the 165 industrial education departments reporting were currently offering 143 industrial arts courses for elementary teachers.
2. A majority of the courses offered were junior, senior, or graduate level courses.
3. These courses were generally taught by industrial education staff with no special training in this area.
4. Classes are generally wood or metal oriented laboratory/lecture classes with student-teacher planned individual projects.
5. Closer communication should be fostered between the elementary education and industrial education departments.
6. In view of these classes being primarily elective, it appears that educators generally do not consider them essential to the preparation of elementary teachers.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Brudzynski (Last name), Alfred (First name), John (Middle name)

Exact Title A COMPARATIVE STUDY OF TWO METHODS FOR TEACHING ELECTRICITY AND MAGNETISM WITH FIFTH AND SIXTH GRADE CHILDREN.

Degree granted Ed. D., Date 1966, No. of pages in report 230

Granted by Boston University School of Education (Name of institution) Boston, Massachusetts (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine whether or not fifth and sixth grade children achieve and retain both the factual materials and their applications better when a unit in electricity and magnetism is taught by the inductive method than when it is taught by the lecture-demonstration technique.

Source of Data and Method of Study:

There were 346 pupils in the population. One hundred eighty-two boys and girls were taught by the inductive method and 164 by the lecture-demonstration technique. The Otis Quick Scoring Test of Mental Ability was given as a pretest. An achievement test was given after this phase and six weeks later for retention.

Findings and Conclusions:

1. The groups were similar insofar as errors of prediction were concerned for both the achievement and retention analyses.
2. The pupils of the lecture-demonstration group with average and below-average intelligence scored slightly higher in the achievement test than comparable pupils in the inductive group.
3. The pupils of the inductive method group with above-average intelligence scored higher than their counterparts in the lecture-demonstration group.
4. The retention differences followed a similar pattern to that of the achievement differences except the reverse was found with relationship to intelligence.

In the sub-group analyses, the boys and girls of the sixth grade and girls of the fifth and sixth grades tended to achieve the factual materials and their application better when they were instructed by the lecture-demonstration method. In retention superiority, the statistical analyses showed no significant differences.

The results of this study suggest that with respect to the achievement of concept-understandings and their applications of the content of a unit in electricity and magnetism, the lecture-demonstration instructions are slightly superior to the inductive method procedure, particularly when girls are involved. For delayed retention, the type of instructional method employed makes very little difference.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Bunten, Charles, A.
(Last name) (First name) (Last name)

Exact Title SELECTING, PURCHASING, ISSUING, FINANCING, AND ACCOUNTING FOR INDUSTRIAL ARTS SUPPLIES IN THE SECONDARY SCHOOLS OF MISSOURI.

Degree granted Ed.D., Date 1955, No. of pages in report 188

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the current practices used in the procurement and management of industrial arts supplies in Missouri, to ascertain the costs and problems of financing industrial arts supplies in the state, and to ascertain the extent to which current practices coincide with practices recommended as desirable by a group of specialists in the field of industrial arts.

Source of data and method of study:

Data were obtained through information forms from 329 industrial arts teachers in the state and from 50 specialists composed of 12 state directors or supervisors of industrial arts, 18 local supervisors of industrial arts, and 20 industrial arts teacher educators.

Findings and Conclusions:

Other than practices relating to the distribution of supplies, the Kansas City and St. Louis schools are following the practices recommended by the specialists, there is some agreement and many differences concerning the selection of supplies; more agreement than disagreement concerning the purchase of supplies; general agreement on the storage of supplies; disagreement on the issuance of supplies; general agreement on the financing of supplies and vast disagreement on the accounting procedures and the forms to use in keeping supply records.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Burdette, Jr. (Last name), Walter (First name), Elbert (Middle name)

Exact Title THE CONTRIBUTION OF INDUSTRIAL ARTS INSTRUCTION TO THE CONSUMER KNOWLEDGE POSSESSED BY STUDENTS OF CENTRAL MINNESOTA.

Degree granted Ed.D., Date 1955, No. of pages in report 135

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the extent to which industrial arts instruction has contributed to the consumer knowledge possessed by high school boys, concerning the selection, use and care of industrial products.

Source of Data and Method of Study:

A specially constructed consumer knowledge instrument was used to examine 791 senior boys of twenty selected Central Minnesota public high schools which offered industrial arts instruction. Raw scores for the American Council on Education Psychological Examination were made available by the administrative officials of the cooperating schools.

Findings and Conclusions:

The extent of influence of industrial arts instruction on the consumer knowledge relating to industrial products, possessed by high school boys of low scholastic aptitude, was found to be low. The extent of influence of industrial arts instruction on the consumer knowledge relating to industrial products, possessed by high school boys of somewhat higher, but still below average scholastic aptitude, was found to be low, but more nearly approaching moderate effectiveness. As the scholastic aptitude of the high school boys more nearly approximates the average, the contribution of industrial arts instruction to the consumer knowledge possessed can be expected to be moderate in extent.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Burghardt (Last name), William (First name), F. (Middle name)

Exact Title SAFETY EDUCATION IN THE TEACHERS COLLEGES OF WEST VIRGINIA.

Degree granted Ed. D., Date 1950, No. of pages in report 282

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To evaluate the status of safety education in the State of West Virginia in contrast to the rest of the nation. To ascertain the need for safety education as a basis for establishing an effective program of safety education.

Source of data and method of study:

A study was made of the vital statistics of both West Virginia and the nation including the status of instruction. The study was made through questionnaires sent to both public and private schools, agencies, and colleges of West Virginia including other States in order to get their teacher training programs and laws.

Findings and Conclusions:

The most effective job was at the elementary level, although there is a need for it at all levels. Death rates in States with good programs of safety education were lower than the national average. These were New York, Pennsylvania, Illinois, and West Virginia. The same type of accidents occur in West Virginia as in the rest of the nation. Railway, mine and quarry accidents as well as fires were higher in West Virginia than in the rest of the nation. Car, trucks and falls caused less deaths than were expected. The national death rate was 72.7/100,000 as compared to 67/100,000 in West Virginia.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Burns, William, E.
(Last name) (First name) (Middle name)

Exact Title AN EXPERIMENTAL STUDY OF THE ATTAINMENT AND RETENTION OF LEARNINGS IN INDUSTRIAL ARTS DRAWING WHEN CLASSIFIED ACCORDING TO SELECTED EDUCATIONAL GOALS.

Degree granted Ed.D., Date 1965, No. of pages in report 213

Granted by University of Maryland College Park, Maryland
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate the effectiveness of retention of mapping principles, facts, and terminology in terms of initial learning and retention with varying levels of achievers, measured through tests of knowledge, translation, and as defined in Benjamin Bloom's Taxonomy of Educational Objectives.

Source of Data and Method of Study:

Subjects were in industrial arts mechanical drawing classes at Montgomery Blair High School, Silver Spring, Maryland. Three experimental and one contest group was used. A levels X time analysis of variance factorial design and Duncan's Multiple Range Test was employed in the experiment.

Findings and Conclusions:

1. The higher the ability level of an instructed group, the greater is the retention level for selected facts and principles relating to mapping.

2. The type of mental skills required to answer a test question and the time since instruction may be factors in determinings retention.

3. Generally, there is a progressive decrease in retention as the time since instruction increases.

4. Subjects are able to translate data relating to mapping better than they can recall factual knowledge or interpret prior learnings.

5. Subjects are able to retain a high percentage of their learning for at least thirteen weeks.

143

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Clausen (Last name), John (First name), Norman (Middle name)

Exact Title THE EFFECT OF AN ENTRANCE REQUIREMENT ON SUCCESS IN SELECTED ENGINEERING COURSES: AN EXPERIMENTAL EVALUATION FOR THE SCHOOL YEAR 1953-54 IN THE COLLEGE OF ENGINEERING, INSTITUTE OF TECHNOLOGY, UNIVERSITY OF MINNESOTA.

Degree granted Ph. D., Date 1955, No. of pages in report 256

Granted by University of Minnesota (Name of institution) Minneapolis, Minnesota (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the effects of solid geometry on learning outcomes in freshman courses in engineering drawing.

Source of Data and Method of Study:

Data were obtained experimentally during the school year 1953-54 utilizing a sample of 348 randomly selected and assigned students matriculating the fall quarter in the College of Engineering. Three experimental treatments were applied. These can be defined in terms of whether or not a student had taken solid geometry prior to completing the courses, Engineering Drawing 4 and 5. Data were collected for the students on five measures: high school scholastic rank; pretest and post test for Engineering Drawing 4; pretest and post test for Engineering Drawing 5.

Findings and Conclusions:

Within the limits of the design of this investigation, the experimental factor, solid geometry, effected superior learning outcomes in Engineering Drawing 4. With respect to the findings pertaining to Engineering Drawing 5, it was concluded that solid geometry generally did not effect superior learning and that further investigation is warranted.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Coburn (Last name), James (First name), Minton (Middle name)

Exact Title A MODEL (FORMULA) FOR DERIVING A HAZARD INDEX OF RAIL-HIGHWAY GRADE CROSSINGS.

Degree granted ______ Date May, 1969 No. of pages in report ______

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To compile data for use as related information in the education of drivers and to derive a formula for computing a hazard index for rail-highway intersections.

Source of Data and Method of Study:

The data for the study were obtained from the Texas Highway Department, The Texas Department of Public Safety, railroad companies, and field observations. The data for related information were compiled from: (1) all crossings on which field data were collected, (2) reports of 642 accidents, and (3) data collected from individual railroad companies. The analysis of the data consisted of the following steps: (1) comparison of variables in rail-highway accidents as related to the driver, vehicle class, and geometric features, and (2) the use of correlation and regression analysis to determine the relationship of thirteen variables to these accidents.

Findings and Conclusions:

1. Tractor-trailer trucks have a more severe accident rate at grade crossings than single-unit trucks and automobiles.
2. Congested areas in both unincorporated and incorporated towns have a different incident rate of rail-highway accidents than do rural areas.
3. Drivers above fifty years of age have a higher incident rate of accidents at rail-highway intersections than drivers below this age group.
4. A high rate of speed is not a prerequisite for becoming involved in a rail-highway accident.
5. The likelihood of a rail-highway accident is determined to some degree by the number of opportunities that are provided for a collision to occur between a motor vehicle and a train.
6. The type of protective device installed at a grade crossing affects the accident potential at the intersection.
7. Except for protective device, the geometric features do not affect the accident potential at this type of intersection.

The need to increase the awareness of drivers approaching a grade crossing is evident from the fact that the variables, probability of conflict and protective device, indicated a significant relationship with accidents in the regression equation.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Cochran, Leslie, H.
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF SELECTED CONTEMPORARY INDUSTRIAL EDUCATION PROGRAMS.

Degree granted Ed. D. Date 1968 No. of pages in report

Granted by Wayne State University Detroit, Michigan
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To compare and analyze selected contemporary programs in industrial education in an attempt to determine the common elements, basic directions, and their significance to the field.

Source of Data and Method of Study:

Current programs were identified, described, and selected plans were compared by means of a conceptual framework. The rankings obtained from this instrument were compared by a proportion of frequency and through the use of a factor analysis.

Findings and Conclusions:

Four major conclusions were identified for the attention of the profession:

1. The field of industrial education has been in a state of flux and reorientation since its early inception in the secondary schools. In the period since 1960 more modifications with wider implications have been produced than in any of the preceding decades.
2. There are identifiable curriculum elements in the field of industrial education that can be incorporated into a conceptual framework to systematically compare contemporary industrial education programs.
3. There is general agreement between individual leaders associated with the selected programs under study on at least fifty per cent of the items under consideration. It should be noted, however, that the structure of these programs may vary greatly since different positions may be taken on key issues.
4. There is general agreement among all of the selected programs, as demonstrated by the identified leaders, on the following areas:
   a. Manipulative type activities are de-emphasized while the applications of scientific principles have received increased support.
   b. Provision for induvidual differences is made through multi-activity organization so the student can progress from a general understanding of industry to more specific tasks.
   c. The classification of content under such areas as "woodworking" and "metalworking," and the focus directed toward a vocational interests and the crafts are de-emphasized.
   d. A "middle-of-the-road position regarding design and craftsmanship is evidenced.

146

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AAIA - NAITTE

Author Coleman, Wayne, Dudley
(Last name) (First name (Middle name)

Exact Title Physical Science Understandings Important to the Education of Industrial Arts Teachers.

Degree granted Ed. D, Date Winter 1967 No. of pages in report 221

Granted by Colorado State College Greeley, Colorado
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study: To determine the amount of physical science, specifically physics and chemistry, which should be included in the undergraduate preparation of all secondary school industrial arts teachers.

Source of data and method of study: Heads of departments of industrial arts teacher education were surveyed to determine the current undergraduate physical science requirements. Random samples of 230 college industrial arts teachers and 260 secondary school industrial arts instructors were taken. They were asked to ascertain their undergraduate physical science preparation, their opinions with respect to the adequacy of their physical science preparation, and their evaluations of the stated physic science principles.

Findings and Conclusions: The findings were the following: About 90 per cent of the departments of industrial arts teacher education require physical science of undergraduate industrial arts teachers-in-training. Almost one-half of the teachers in the survey considered their undergraduate physical science preparation to have been inadequate. An understanding of the principles of physics was considered relatively more important than an understanding of the principles of chemistry. There is a definite group of principles of physical science which should be included in the undergraduate preparation of teachers.

Conclusions reached were the following: All industrial arts teachers-in-training should take at least twelve semester hours of physical science. Since many industrial arts teachers seek additional education, graduate courses in physical science should be established to strengthen undergraduate physical science preparation.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AAIA - NAITTE

Author Collins, Herman, George
(Last name) (First name) (Middle name)

Exact Title The Status and Trends of Industrial Arts Education in the State of Colorado.

Degree granted Ed. D., Date Fall 1966 No. of pages in report 237

Granted by Colorado State College Greeley, Colo.
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study: To determine the status and trends of industrial arts education in the public secondary schools of Colorado.

Source of data and method of study: The writer developed a questionnaire in order to obtain information concerning the industrial arts teachers and the industrial arts teachers and the industrial arts curriculum in Colorado. It was sent to 614 industrial arts teachers as listed in the 1965-1966 Colorado Industrial Arts Association Directory. Approximately 74 per cent useable returns were received after three mailings. The data received was reported by using frequencies, percentages, and averages.

Findings and Conclusions: Industrial arts teachers have had more training for the position they now hold than in previous years. They are also staying in the field of industrial arts. It is evident that industrial arts teachers are interested in their profession and see the need for future training. 87 per cent of the teachers reported that they plan to do graduate work. As a group, the Colorado industrial arts teachers have a good knowledge of industry and its procedures as indicated by an average of 4.5 years of work experience in industry.

Colorado school administrators have a good attitude toward industrial arts. As an instructional area in the public schools, the number of industrial arts teachers in Colorado has increased from 1957 to 1966 at the rate of 160.

The Colorado industrial arts teachers, as a group, indicated that in the elective industrial arts classes they taught, the students were average in ability. They indicated as main purposes of industrial arts the acquisition of skills in tools, machines, and materials. Course contents appeared to vary widely throughout the state. The general shop approach is the most prevalent type of approach used in Colorado secondary schools. In organizing their course contents, they used both teaching plans and curriculum guides.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Combs (Last name), Stanley (First name), LeQuatte (Middle name)

Exact Title A STUDY OF TERMINAL VOCATIONAL STUDENTS IN THREE CALIFORNIA PUBLIC JUNIOR COLLEGES; IMPLICATIONS FOR GENERAL EDUCATION.

Degree granted Ed.D., Date 1948, No. of pages in report 197

Granted by University of California at Los Angeles (Name of institution) Los Angeles, Calif. (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the characteristics and general trends of terminal education and its relationship to general education in the junior college curriculum. Statistics are given on age, health, church preference, work experience, family occupations, hobbies, family educational background, occupational aims, junior college majors, grades, and standardized test results.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ART EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AAIA - NAITTE

Author Conley (Last Name), Franklin (First Name), (Middle Name)

Exact Title An Analysis of Factors Involved in the Recruitment, Preparation, Certification, and Retention of Day Trade Teachers.

Degree Granted Ed. D. Date No. pages in report

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To assess the status of recruitment, preparation, certification, and retention practices and procedures concerning day trade teachers. A secondary purpose was to assess the effectiveness of these practices as expressed by day trade teachers, local school administrators, and state administrators.

Source of Data and Method of Research: Data for the study were obtained from information forms completed and returned by 435 day trade teachers, 135 local administrators, and 6 state administrators in the area designated by the United States Office of Education as Region VI. The participating states included Iowa, Kansas, Minnesota, Missouri, Nebraska, and South Dakota.

Findings and Conclusions: "Personal contacts between trade teachers and potential teachers," "letters to potential teachers," "personal calls or visits paid by local administrators," and "teaching part-time in evening vocational classes" appear to be effective methods of attracting tradesmen into day trade teaching. Information about career opportunities in day trade teaching should be directed to potential teachers among tradesmen, their spouse, and to the person who regularly recruits teachers for the school system. From the numerous titles of the certification credentials reported and due to the apparent lack of information about certification requirements, it would appear that much effort is needed in this area to standardize the terminology and requirements. It appears that if funds were made available to assist them, larger numbers of day trade teachers would seek college degrees.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Cooke, Robert, Locke
(Last name) (First name) (Middle name)

Exact Title TRADE AND INDUSTRIAL EDUCATION FOR GIRLS AND WOMEN IN CALIFORNIA.

Degree granted Ed. D., Date 1932, No. of pages in report 216

Granted by University of California Berkeley, California
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the problem of adequate education for the training of girls to meet their vocational needs. It also raises some problems for future consideration. The history of vocational education in California for girls is reviewed.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Coover, (Last name), Shriver (First name), L. (Middle name)

Exact Title THE NATURE AND MEASUREMENT OF CERTAIN MECHANICAL ABILITIES.

Degree granted Ed.D., Date 1941, No. of pages in report ___

Granted by University of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

An experiment to obtain a valid measure of mechanical ability at the adult level in order to obtain better selection criteria for industrial arts teacher education curricula. A testing instrument in mechanical ability is included.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - NAITTE - AIAA

Author Cotrell (Last name), Calvin (First name), James (Middle name)

Exact Title A Study of Factors Essential to Staffing Post-Secondary Technical Education Programs.

Degree Granted Ph. D. Date 1960 No. pages in report 178

Granted By The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To obtain information helpful to administrators concerned with the problems of recruiting and selecting competent technical teachers for postsecondary technical education programs.

Source of Data and Method of Research: Data were obtained through the use of a questionnaire which was sent to selected administrators and technical teachers. Respondents represented forty-eight 2-year publicly controlled postsecondary technical schools located in California, Michigan, New York, and Texas.

Findings and Conclusions: The major findings and conclusions of the study pertain to the following: (a) The most important media for locating potential technical teachers; (b) the significant motives which influence persons to enter technical teaching; and (c) the tangible elements, other than personality factors, which should be considered in the selection of potentially competent and effective technical teachers.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Cotton (last name), George (first name), R. (middle name)

Exact Title COLLEGIATE TECHNICAL EDUCATION FOR NEGROES IN MISSOURI WITH PROPOSED PLANS FOR DEVELOPMENT.

Degree granted ______ Date 1944 No. of pages in report ______

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Cozzens (Last name), Charles (First name), Richard (Middle name)

Exact Title A COMPARISON OF TWO TECHNIQUES OF TEACHING ENGINEERING DESCRIPTIVE GEOMETRY.

Degree granted Ed. D. Date 1965 No. of pages in report

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to develop and test the effectiveness of a self-instructional, self-scoring instrument to be used by a student outside of a engineering descriptive geometry class.

Source of Data and Method of Study:

Three hundred and fifty-six students enrolled in descriptive geometry courses were presented assignments with either the self-instructional technique or the conventional method. Eighteen problems and six principles were included as part of each assignment and the effectiveness of the treatments was measured in terms of self-reported scores and attitudes regarding the two techniques.

Findings and Conclusions:

An analysis using matched pair t tests, analysis of variance and factor analysis revealed that self-reporting techniques had an overall impact on learning, but differences were not significant when individual differences were accounted for. It was concluded that since less time was required to use (score) self-report forms and since students could be trusted to score assignments accurately, the self-instructional, self-reporting techniques could be a valuable contribution to teaching descriptive geometry and/or similar types of courses.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Craft, Clyde, O'Brien
(Last name) (First name) (Middle name)

Exact Title CREATIVITY IN ENGINEERING GRAPHICS: AN EXPERIMENTAL COMPARISON OF TWO TYPES OF GRAPHICS PROBLEMS.

Degree granted Ed. D., Date 1967, No. of pages in report

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine the relative effectiveness of an engineering grpahics course where the traditional drafting problems have been supplemented with open-end design problems.

Source of Data and Method of Study:

A randomized, complete block design, using 180 freshmen engineering students, was used to test differences between the experimental and control treatments. Three teachers each taught an experimental and a control group. Traditional drafting problems were given the control group while the experimental treatment received self-instruction booklets. Pre and post tests gain scores were analyzed by covariance techniques adjusting for pre-test scores.

Findings and Conclusions:

The results of the study indicated that open-end design problems, in addition to traditional problems, enhanced certain creative abilities (ideational fluency and originality) as well as facilitated the learning and mastery of basic concepts--skills of engineering graphics. These findings suggested that courses in engineering graphics can be developed to enhance the creative expression of ideas without hindering the acquisition of basic, prerequisite drafting skills and knowledges.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Crawford, Jr. (Last name), Bryant (First name), (Middle name)

Exact Title INDUSTRIAL ARTS PROGRAMS FOR ADULTS: A STUDY TO DEVELOP PROCEDURES AND PRACTICES WITH REFERENCE TO INDUSTRIAL ARTS PROGRAMS WITH IMPLICATIONS FOR ADULT LIVING.

Degree granted Ph. D. Date 1961 No. of pages in report 279

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate representative industrial arts and allied adult education programs for valid features of organization, administration, and operation; and to arrive at certain implications for enriched adult living in an age of "new leisure."

Source of Data and Method of Study:

Questionnaires were sent to directors of adult programs to determine the extent and quality of adult industrial arts programs and the impact of the movement in the communities studied. An analysis was made of educational procedures that agencies and schools used in providing industrial zrts programs for adults. This analysis involved classifying the data and summarizing the findings which indicated the structure of programs in schools and agencies.

Findings and Conclusions:

The study shows that industrial arts, as general education, contributes to adult education by:

1. The extension of the education of the individual
2. The development of manipulatiave skills in the use of tools and materials.
3. The promotion of the conservation of human and material resources in recreational and "do-it-youself' activities.
4. The provision of educational opportunity in the home workshop and other areas
5. The development of personal and social characteristics.

Findings of the investigation appear to justify the recommendation that adult educators study the community for resources that will contribute to these programs. The architecture of the buildings, the size of class units, the concepts of learningof therapeutic need, the involvement of the educational community in decisions the nature kf community resources that facilitate growth -- all provide examples of what must be considered.

The difference in community needs makes it impossible to set up an adult laboratory program that would be practical in all situations. The program therefore should be organized and conducted according to individual and community needs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Crawford, Harold, Wakeling
(Last name) (First name) (Middle name)

Exact Title ORGANIZATIONAL PATTERNS FOR INDUSTRIAL EDUCATION PROGRAMS IN SELECTED LAND-GRANT COLLEGES.

Degree granted Ed. D., Date 1960, No. of pages in report 155

Granted by Wayne State University (Name of institution) Detroit, Michigan (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

This study sought to determine what should be the organizational pattern for industrial education programs in the selected institutions.

Source of Data and Method of Study:

The catalogs of the selected institutions; the proceedings of the meetings of the Southern Association of Colleges and Secondary Schools; the American Association of Land-Grant Colleges and State Universities; and the Conference of Presidents of Negro Land-Grant Colleges (now defunct). Persons interviewed at each of the selected institutions, using a tape recorder, included the president, dean, industrial education head, and a teacher of industrial education selected by the department head. Open-ended questions were used for the structured interviews.

Findings and Conclusions:

The needs of the several States that support these institutions differ to the degree that no organizational pattern for industrial education is appropriately common to these 17 institutions. Desegregation tends to influence the organizational patterns for industrial education by increasing or decreasing the need for programs in the service area within the State. Terminal technical programs were not in demand at the time of this study.

The major objective of industrial education programs in the selected institutions was teacher education. Industrial teacher education programs can be provided best in cooperation with other teacher education programs but free from domination by the administrators and supervisors of those programs. Industrial teacher education programs share in a coordinated plan for supervised teaching and make use of general courses in teacher education. There is a move in the selected institutions to separate industrial education and engineering.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Crawford, , John , Edmund
(last name) (First name) (Middle name)

Exact Title MEASUREMENT OF SOME FACTORS UPON WHICH IS BASED ACHIEVEMENT IN ELEMENTARY MACHINE DETAIL DRAFTING

Degree granted Ed.D. , Date 1941 , No. of pages in report 113

Granted by University of Pittsburgh Pittsburgh, Pennsylvania
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C.

Purpose of Study:

An attempt to set up a battery of aptitude tests which will discriminate aptitude for machine detail and design.

Source of Date and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Cremer, Kenneth, Dale
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF BEHAVIORAL OBJECTIVES WRITTEN WITH AND WITHOUT THE USE OF 'BEHAVIORAL OBJECTIVE PLANNING GUIDES'.

Degree granted Ed. D., Date 1970, No. of pages in report 107

Granted by Utah State University Logan, Utah
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The major purposes of this investigation were to develop behavioral objective planning guides at the six congitive levels of the Taxonomy, as classified by Bloom and his associates, and to provide an analytical comparison of behavioral objectives written with and without the use of behavioral objective planning guides.

Source of Data and Method of Study:

Instruments were used to determine the ability of 180 teachers to write behavioral objectives without aid; with Mager's criteria; and with behavioral object planning guides. A six member jury was used to determine if objectives written by the sample were properly written to Mager's criteria and to which category of the Taxonomy the objectives matched.

Findings and Conclusions:

The 180 teachers used in the study were randomly assigned to three groups, A,B, and C. The three groups were further divided into six levels related to the six categories of the Taxonomy. The comparison made between the three groups and six categories produced a significance at the five percent level.

The conclusions derived from the study indicated that most teachers cannot write behavioral objectives according to Mager's criteria and of those that could most can write them only at the lower categories of the Taxonomy. The assistance of behavioral objective planning guides produced a consistently higher level of success in writing behavioral objectives to Mager's criteria and to the various categories of the Taxonomy.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Cressman (Last name), Paul (First name), L. (Middle name)

Exact Title SAFETY EDUCATION IN PENNSYLVANIA INDUSTRIAL SCHOOL SHOPS.

Degree granted Ed. D., Date 1934, No. of pages in report 141

Granted by Pennsylvania State College (Name of institution) State College, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An investigation of the accidents in the school shops of Pennsylvania for the school year, 1933-34. Forms for an objective means of reporting safety data are developed.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Crist (Last name), LeRoy (First name), (Middle name)

Exact Title PERSONALITY VARIABLES OF INDUSTRIAL ARTS MAJORS.

Degree granted Ed. D., Date 1961 No. of pages in report 96

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To determine whether or not differentiation could be made on the basis of certain personality variables peculiar to the industrial arts groups. It is to determine whether or not differentiation could be made on the basis of certain personality need variables as measured by the scales of the Edwards Personal Preference Schedule between college seniors who are industrial arts majors and Edwards' normative group of college men, between college seniors who are industrial arts majors and industrial arts teachers (Monroe, 1960), and between college seniors who are preducted the most and least successful industrial arts majors.

Source of Data and Method of Study:

The population of this study was limited to the 125 college seniors of the 1960-61 school year who were industrial arts majors at four accredited midwestern and western teacher education colleges. They were classified into three groups as follows: (1.) The total group of industrial arts majors. (2.) The most successful industrial arts majors. (3.) The least successful industrial arts majors. A rating scale was devised and used for the purpose of securing a rank order evaluation of the industrial arts majors. The statistical analysis of the data was concluded from the following: (1) a comparison of mean score differences by the t-test of significance, and (2) a pattern analysis of the Edwards Personal Preference Schedule variables by the chi-square test of significance.

Findings and Conclusions:

1. The Edwards Personal Preference Schedule does tend to differentiate between the industrial arts majors and the Edwards' normative group of college men.
2. The Edwards Personal Preference Schedule does tend to differentiate between the industrial arts majors and Monroe's group of industrial arts teachers.
3. The Edwards Personal Preference Schedule does tend to differentiate between the most successful industrial arts majors and the least successful industrial arts majors.
4. Pattern analysis of the scores on the Edwards Personal Preference Schedule does tend to differentiate between the most successful industrial arts majors and the least successful industrial arts majors.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AAIA - NAITTE

Author Crouch (Last name), J. (First name), Page (Middle name)

Exact Title An Appraisal of the 1967 NDEA Institutes for Advanced Study in Industrial Arts and Their Impact Upon Professional Activities of Participants and Directors.

Degree Granted Ed. D. Date 1968 No. pages in report

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the impact of the 1967 NDEA Institutes for Advanced Study in Industrial Arts on the subsequent professional practices of Institute directors and participants, and to ascertain the opinions of those same individuals regarding the instruction, organization, and administration of the Institutes, as viewed in retrospect.

Source of Data and Method of Research: Following a review of the related research and the final Institute reports obtained from the directors, two preliminary information forms (one for directors and one for participants) were developed and critiqued by specially selected groups of individuals. The information forms for directors and participants were then revised and mailed to the 29 directors and 711 participants. The data upon which the final report was based were obtained from 28 directors and 671 participants.

Findings and Conclusions: Based upon the responses of 94.4 per cent of the participants and 96.6 per cent of the directors, the following conclusions appear warranted: (1) The Institutes have clearly affected the instructional programs of the directors and participants and will continue to have some impact as plans and proposals materialize. (2) The Institutes influenced both directors and participants to become more involved in extra-instructional professional activities (3) The stipend payments are essential to the success of the Institute program while graduate credit is of relatively less importance in attracting participants to the Institutes. (4) The instructional programs of the 1967 Institutes were successful and of high quality. (5) The relationships among participants, and between participants and the Institute staffs were generally superior to those of regular collegiate programs and served to promote the overall success of the Institutes. (6) The sponsoring departments are attempting to assume the responsibility, through an expenditure of time and funds to ascertain the quality of their respective Institutes; however, this is seldom given top priority by the sponsoring departments.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Crowder, Gene, A.
(Last name) (First name) (Middle name)

Exact Title VISUAL SLIDES AND ASSEMBLY MODELS COMPARED WITH CONVENTIONAL METHODS IN TEACHING INDUSTRIAL ARTS.

Degree granted Ed. D., Date 1968, No. of pages in report

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To compare the relative effectiveness of visual slides and individual assembly models as a mode of instruction with conventional methods of instruction for selected units of general shop.

Source of Data and Method of Study:

The experimental method was used to test the effectiveness of the two modes of instruction using a stratified sample of 280 public school students of differing abilities as measured by a test of initial learning and retention.

Findings and Conclusions:

The findings indicated that (a) the experimental method was, in all cases, superior to the conventional method of instruction for both initial learning and retention for high and low ability students alike. It was, therefore, concluded that visual slides and individual assembly models are a realistic, effective alternative to industrial arts instruction for, at least, selected units of instruction.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Crudden (Last name), Paul (First name), Bernard (Middle name)

Exact Title THE TRAINING OF PRODUCTION SUPERVISORS AT THE PHILADELPHIA NAVY YARD DURING WORLD WAR II.

Degree granted Ed.D., Date 1944, No. of pages in report 214

Granted by University of Pennsylvania (Name of institution) Philadelphia, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A description of the steps employed in the development of a training program for production supervisors. The data are based on the author's personal experiences at the Navy Yard, 1940-1944.

Source of Data and Method of Study:

The classes were organized on the basis of job analysis which isolated the teaching points that must be covered in the instructional. The steps of a well-taught lesson were demonstrated and explained, and practice in planning simple lessons was provided. In the supervisory training cou-rse the chief aim was to create attitudes which would make for skill in human relations. Supervisors were assembled in groups of fifteen to twenth and the course was conducted along lines of what is generally termed the conference method. The subjects discussed by the supervisors included: supervisory responsiblities, leadership, development of morale, cooperation, qualities of a supervisor, techniques of giving orders, grievances, discipline, women workers, and other topics of particular interest to the yard supervisors. Conference techniques were used as much as possible.

Findings and Conclusions:

As of December 1, 1943, 1081 supervisors and prospective supervisors have completed a course in instructor training and 511 supervisors have completed training in supervisory principles. Approximately 200 people are currently intraining in both courses. By September, 1944, all of the 1574 production supervisors will have completed both instructor and supervisory training. It is planned, when all supervisors have received basic training in the two courses described above, to reorganize the supervosory course to meet specific needs of the various shops. Future classes will be composed exclusively of supervisors in a given shop, and the topics discussed will be of common and particular concern to the members enrolled.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Crump (Last name), Danny (First name), L. (Middle name)

Exact Title AN EVALUATION OF THE INDUSTRIAL ARTS DEPARMTNET OF THE SECONDARY SCHOOLS OF THE STATE OF ARKANSAS.

Degree Granted: Ed. D. Date 1968, No. of pages in report 121

Granted by University of Arkansas (Name of Institution) Fayetteville, Arkansas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to evaluate and determine the educational status of industrial arts teachers and programs in the public secondary schools of Arkansas.

Source of Data and Method of Study:

A list of names and addresses of the teachers of industrial arts in the State of Arkansas was formulated from the files of the State Department of Education. A questionnaire was sent to the 82 Industrial Arts Department teachers; there was a 71 per cent return.

Findings and Conclusions:

Growth of industrial arts programs in Arkansas has not kept pace with that of the rest of the Nation. The increase in the number of departments has not been as large as was predicted in previous studies. Very little use has been made of grants authorized by federal legislation.

Standardized materials have been used to moderate degree in the state's total industrial arts program.

Enrollment of students in industrial arts classes has been done almost entirely by student choice, with very little influence exerted by counselors and industrial arts teachers.

Industrial arts programs have made much progress in the last decade and the indications are that progress will become even more apparent in the coming decade.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Crumpton (Last name), Charles (First name), R. (Middle name)

Exact Title A COMPARISON OF DAY-TRADE WITH NON DAY-TRADE MALE STUDENTS IN THE LAFAYETTE HIGH SCHOOL

Degree granted Ed.D., Date 1952, No. of pages in report 137

Granted by Indiana University (Name of institution) Bloomington, Indiana (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To discover whether significant differences exist between male day-trade school students and other male students of the Lafayette High School, Fayette County, Kentucky.

Source of Data and Method of Study:

Data were secured from the following tests: General Aptitude Test Battery, Differential Aptitude Tests, O'Rurke Mechanical Aptitude Test, and the Bell Adjustment Inventory and Questionaire.

Findings and Conclusions:

No significant difference exists between the day-trade and the non day-trade students in spatial aptitude, form perception, aiming or eye-hand coordination, finger dexterity, manual dexterity, space relations, mechanical reasoning, and clerical speed and accuracy.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Cummins (Last name), Carl (First name), Clinton (Middle name)

Exact Title AN ANALYSIS OF STUDENT PERSONNEL PRACTICES IN SELECTED INDUSTRIAL ARTS TEACHER EDUCATION INSTITUTIONS.

Degree granted Ed. D., Date 1957, No. of pages in report 276

Granted by University of California (Name of institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To analyze student personnel practices in the industrial arts departments of nine colleges in California accredited to recommend for the special secondary teaching credential.

Source of Data and Method of Study:

A comprehensive review of the literature of authorities in student personnel work in higher education; a questionnaire survey of 548 industrial arts majors in selected institutions, personal interviews with a representative sample of 30 industrial arts teacher educators, a descriptive review of the practices employed, and a synthesis of the data.

Findings and Conclusions:

Agreement is widespread among authorities concerning a point of view or pervasive philosophy for student personnel work in higher education. Attention is directed to the student's well-rounded development--physically, socially, emotionally, and spiritually, as well as intellectually. No standard plan for student personnel work prevails in the selected departments, although teacher educators agree that it is their responsibility to participate in the orientation, counseling, records, selection, recruitment, student activities, placement and followup. The author concludes with specific findings for each of these areas.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Cutler (Last name), Theodore (First name), Harold (Middle name)

Exact Title IN-SERVICE TRAINING PROGRAM WITHIN INDUSTRY IN DENVER.

Degree granted Ph.D., Date 1948, No. of pages in report 203

Granted by University of Colorado (Name of institution) Boulder, Colorado (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A descriptive analysis of the training within industry programs operating in Denver, Colorado.

Source of Data and Method of Study:

Data were based on personal interviews with senior personnel or supervisory officers of 100 industrial organizations.

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Daines (Last name), James (First name), R. (Middle name)

Exact Title THE EFFECT OF TEST DIFFICULTY ON INFORMATIONAL ACHIEVEMENT IN A TECHNICAL INDUSTRIAL EDUCATION COURSE AT THE COLLEGE LEVEL.

Degree granted Ed.D., Date 1968, No. of pages in report ____

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to ascertain the effect of two testing approaches (low difficulty and high difficulty) on informational achievement in a technical industrial education course.

Source of Data and Method of Study:

A total of fifty students were included in the study. In this two-group controlled experiment, each group consisted of one section of 176-202 Power Mechanics at Stout State University during the second semester of 1967-68.

Findings and Conclusions:

1. Gains associate with the "low difficulty testing approach" were significantly higher than those of the "high difficulty testing approach".
2. High ability students receiving the low difficulty treatment out-performed their less able associates as well as the high ability students in the high difficulty testing treatment.
3. There was no significant difference in attitude toward the course between the treatment groups.
4. Differences between the low ability subgroups were not statistically significant.

170

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Dalton (Last name), Francis (First name), Warren (Middle name)

Exact Title THE DEVELOPMENT OF INDUSTRIAL EDUCATION IN MICHIGAN.

Degree granted Ph. D., Date 1937, No. of pages in report 228

Granted by University of Michigan (Name of institution) Ann Arbor, Michigan (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A brief resume' of the development of industrial education in the world with particular emphasis upon the development and progress of subsidized industrial education in Michigan. The principal aim throughout has been to bring together facts which appear to be significant without attempting to philosophize upon the effects of industrial education upon society.

Source of data and method of study:

Information not Available.

Findings and Conclusions:

Information not Available.

171

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Danaher (Last name), Eugene (First name), I. (Middle name)

Exact Title THE FEDERAL TRAINING-WITHIN-INDUSTRY PROGRAM.

Degree granted Ph.D., Date 1946, No. of pages in report ____

Granted by Stanford University (Name of institution) Stanford, California (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Daniels, (Last name), Blair (First name), E. (Middle name)

Exact Title TECHNICAL AND INDUSTRIAL EDUCATION IN THE PUBLIC SCHOOLS OF MEXICO.

Degree granted Doctors, Date 1937, No. of pages in report ______

Granted by Temple University (Name of institution) Philadelphia, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Dannenberg, Raymond, Arthur
(Last name) (First name) (Middle name)

Exact Title THE RELATIONSHIP OF INTELLIGENCE TO REINFORCEMENT IN A LINEAR PROGRAMMED INSTRUCTION UNIT DEALING WITH THE FREE ENTERPRISE SYSTEM.

Degree granted Ph. D. Date 1965 No. of pages in report 144

Granted by The University of Michigan Ann Arbor, Michigan
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the relationship of intelligence to reinforcement frequency in programmed instruction.

Source of Data and Method of Study:

A programmed unit titled The Free Enterprise System consisting of 408 frames was administered to 182 high school juniors and seniors. The subjects were randomly assigned to one of three groups with three different schedules of reinforcement. In addition to the programmed unit, each subject completed an identical 80-item pre-test, post-test, and retention criterion test.

Findings and Conclusions:

From the analyses, it was concluded that continuous reinforcement, as generally used in programmed instruction, is a factor in producing correct responses on a programmed unit of instruction. However, this beneficial effect is not evident in measurements based on criterion tests.

174

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Danovitz (Last name), Saul (First name), (Middle name)

Exact Title THE RELATIONSHIP OF CERTAIN EDUCATIONAL EXPERIENCES IN THE SECONDARY SCHOOL TO ACHIEVEMENT IN INDUSTRIAL SUCCESS AND LEISURE TIME ACTIVITIES IN LATER LIFE.

Degree granted Ed. D., Date 1957, No. of pages in report 127

Granted by University of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To show the relationship of certain educational experiences in the secondary school to achievement in industrial success and leisure-time activities in later life.

Source of Data and Method of Study:

The equivalent-groups method of comparison was employed. The primary sources of data were the apprentice records of the Aluminum Company of America, New Kensington Works, and a questionnaire mailed to all former apprentices of the Company.

Findings and Conclusions:

The vocational graduate had greater success in the completion of the apprentice training program and in shopwork and attained the same level in mathematics as that attained by the non-vocational graduate. Although no major difference was noted in leisure-time activities in later life, slight variations did appear between the groups. The attitude toward the apprentice training program was approximately the same for both groups. The majority of the apprentices felt that the training program was worthwhile.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA — NAITTE

Author Darden, (Last name), Byrnes (First name), L. (Middle name)

Exact Title A STUDY OF THE INDUSTRIAL ARTS DEPARTMENTS OF THE UNIVERSITY AND COLLEGES OF TENNESSEE WHICH OFFER SUFFICIENT CURRICULUM FOR TEACHER CERTIFICATION IN THAT FIELD AT THE BACCALAUREATE LEVEL.

Degree granted Ph.D., Date 1951, No. of pages in report 307

Granted by The Ohio State Univeristy (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the amount and quality of training in industrial arts and to ascertain the need for and probable direction of further developments in industrial arts teacher education in the state of Tennessee.

Source of Data and Method of Study:

The data were obtained through personal interviews, observations and a questionnaire to all staff members of the eleven teacher's colleges which offered work in industrial arts on the baccalaureate level.

Findings and Conclusions:

There was a definite lack of a statement of purposes among the several institutions; however, the writer found through personal interview that they did operate within the philosophical frame of reference of each institution. There was considerable flexibility in the curriculum of each institution. General education and professional courses were adequate. The professional achievement of the staff members was deemed adequate but not outstanding. The physical facilities were judged to be good; likewise the instructional techniques employed. Most schools were found to provide good off-campus student teaching facilities with adequate supervision. The writer proposed a series of recommendations concerning the development of purposes, evaluation and revision of the curriculum, student personnel services, upgrading the staff, improved administrative practices, physical facilities and their improvement, instructional techniques, student teaching, placement and follow-up.

176

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Dasgupta (Last name), Debendra (First name), Chandra (Middle name)

Exact Title THE PLACE OF VOCATIONAL EDUCATION IN MODERN EDUCATIONAL THEORY FROM THE SIXTEENTH TO THE TWENTIETH CENTURY.

Degree granted Ed.D., Date 1932, No. of pages in report 224

Granted by University of California (Name of institution) Berkeley, California (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study giving the educational thinking of famous educators and philosophers regarding vocational training in the schools. A review of the writings of eminent people interested in education from the sixteenth to the twentieth centuries is included.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Davenport, Joe, Underwood
(Last name) (First name) (Middle name)

Exact Title AN ANALYSIS OF THE STATUS AND NEEDS, WITH SUGGESTIONS FOR IMPROVEMENT, OF INDUSTRIAL ARTS EDUCATION IN THE PUBLIC SECONDARY SCHOOLS OF ARKANSAS.

Degree granted Ed. D., Date 1959, No. of pages in report 225

Granted by University of Arkansas (Name of institution) Fayetteville, Arkansas (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the status of industrial arts education in Arkansas; to examine the effectiveness and needs of existing programs; to ascertain the nature of plans in progress for the improvement and expansion of industrial arts programs; and to make recommendations for further improvement.

Source of Data and Method of Study:

All schools in the State having programs of industrial arts were visited. Information blanks were filled out by school administrators, teachers, and pupils in each school offering industrial arts. Questionnaires were mailed to 200 schools not offering industrial arts to determine their plans for the future, and the responses were analyzed.

Findings and Conclusions:

Industrial arts was taught by 64 teachers in 46 schools in 25 districts in Arkansas in 1958-59, to an enrollment of 6,298 students. Three industrial arts teachers had no degree; 46 held the bachelor's degree; and 13 had completed requirements for the master's degree. Salaries of industrial arts teachers ranged from less than $3,000 to over $5,000, with a median of approximately $3,800. Salaries of teachers with the master's degree averaged about $900 higher than those with the bachelor's degree. Salaries of teachers with no degree were about $900 less than the salaries of those with the bachelor's degree. Of the schools offering industrial arts, 62.5 percent offered general shop courses. Twenty-two percent of the schools that did not offer a program in industrial arts reported plans being made to offer such a program.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - ~~AIAA~~ - NAITTE

Author Davis (Last name), Jim (First name), Lee (Middle name)

Exact Title Power As Applied to Industrial Arts Teacher Preparation At the College Level.

Degree granted Ed. D., Date Summer 1966 No. of pages in report 127

Granted by Colorado State College (Name of institution) Greeley, Colorado (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To establish course content in power generation and transmission for use in industrial arts teaching preparation which would be acceptable to the majority of the college teaching profession in industrial arts, and to analyze the written materials used by the participating schools to determine any inadequacies of coverage.

Source of data and method of study: Data was obtained by means of an open end questionaire sent to the department heads of all schools listed in the "Industrial Teacher Education Directory" which offered either an undergraduate degree in industrial arts or had a department of industrial arts. The questionaire contained 171 items of information which concerned the area of power generation and transmission. The respondents were asked to rate the items on a five-point scale as to their importance in the industrial arts program.

Findings and Conclusions: Results showed 100 per cent agreement that power should be included in the industrial arts program. All items in the questionnaire were acceptable by the majority of the respondents as being a needed part of the power program.

The trend in industrial arts is away from the auto mechanics approach toward the application of power as it is used in industry and everyday life.

The profession is slow to change from the traditional approach of mechanics to the study of all forms of power generation and transmission. This is probably due to the lack of adequate and readily available written instructional material for teacher and student. The only course open to the teacher is the use of specialized textbooks and industrial materials which do not fit the purposes of general education.

The material available may be inadequate but there is strong indication that the teachers of industrial arts are aware of these inadequacies and have found sources of available information to incorporate into their programs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Davis (Last name), Warren (First name), C. (Middle name)

Exact Title THE PHILOSOPHICAL ELEMENT IN A TECHNICAL PROGRAM: A STUDY OF THE PHILOSOPHY COURSE AT THE ROCHESTER ATHENAEUM AND MECHANICS INSTITUTE.

Degree granted Ph.D., Date 1936, No. of pages in report

Granted by University of Buffalo (Name of institution) Buffalo, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Davison, Harold, J.

Exact Title STATE INTEGRATION OF PRACTICAL ARTS AND VOCATIONAL EDUCATION.

Degree granted ______, Date 1931 No. of pages in report ___

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

181

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Dean (Last name), C. (First name), Thomas (Middle name)

Exact Title PREDICTION OF ACHIEVEMENT OF NATIVE STUDENTS IN ENGINEERING AT IOWA STATE COLLEGE.

Degree granted Ph.D., Date 1951, No. of pages in report 100

Granted by Iowa State College (Name of institution) Ames, Iowa (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the significant factors that affect college success in the Engineering Division of Iowa State College, Ames, Iowa, and to develop a table of Probable success in this curriculum.

Source of Data and Method of Study:

Data were obtained from the Registrar's Office, the Testing Service, and the Division of Engineering files for the 833 cases used.

Findings and Conclusions:

Prediction of success could be best made by ACE plus high school grade point, or if available, the first quarter marks or mathematics and chemistry sequence marks. Thirty-one per cent of the entering native students graduated.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Deck, William, Luther
(Last name) (First name) (Middle name)

Exact Title A RESOURCE RESEARCH IN ELECTRICITY.

Degree granted Ph. D., Date 1955, No. of pages in report 273

Granted by The Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To trace the development of electricity and its value and application to areas of industrial arts, agriculture, medicine, science, and health. To develop a proposed program for industrial arts teacher education with emphasis on electricity.

Source of Data and Method of Study:

Bibliographical methods were used, including books, pamphlets, and periodicals. Experimentation was used to find new ways of presenting the technology to the students. Personal interviews were made with many persons in the electrical field. Induction and deduction were used in arriving at conclusions. Questionnaires were used to ascertain the semester hours offered in electricity by industrial arts teacher-education institutions. Personal observations of electrical laboratories were made.

Findings and Conclusions:

Electricity should be taught at all levels: elementary through adult. Administrative officers at State and local levels need to clarify their appreciation of electricity and the need for it in the schools by making explicit recommendations as well as by arranging for the necessary funds. Teacher educators should clarify their purposes to offer better programs and work towards better standardization. Literature in the field must be developed; such development should be stimulated by industrial arts consultants and teachers. Refresher and inservice courses will need to be offered.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Decker, George, Clarke
(Last name) (First name) (Middle name)

Exact Title AN INDUSTRIAL ARTS MASTER'S DEGREE PROGRAM: WITH PARTICULAR REFERENCE TO THE STATE OF NEW YORK.

Degree granted Ph.D., Date 1943, No. of pages in report 258

Granted by Ohio State University Columbus, Chio
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An investigation of the facilities for training industrial arts majors on the master's degree level. It proposes a program for New York State, including administrative problems, objectives, faculty requirements and responsibilities, and selection and admission.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Decker, Howard, S.
(Last name) (First name) (Middle name)

Exact Title RELATED INFORMATION IN THE GENERAL SHOP.

Degree granted Ed. D., Date 1953, No. of pages in report 98

Granted by Columbia University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To examine the area of related information in the industrial arts general shop.

Source of data and method of study:

Data were obtained from a review of the aims of industrial arts and a study of the materials, processes, and products which industrial arts and industry have in common.

Findings and Conclusions:

Five basic ways of manipulating materials were evolved; plasti-crafting, separation, fabrication, internalization and externalization. Related information should be introduced at the teachers college level in the shop, methods, and curriculum courses.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Dennis (Last name), Ervin (First name), Allen (Middle name)

Exact Title AN EXPERIMENTAL ANALYSIS OF INDUSTRIAL ARTS CONCERNING THE ACCOMPLISHMENT OF SELECTED OBJECTIVES.

Degree granted D. Ed., Date 1966, No. of pages in report ___

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to ascertain the present status of industrial arts effectiveness towards the accomplishment of selected objectives: (a) interest in industry (b) health and safety, and (c) habit of orderly performance.

Source of Data and Method of Study:

A specially developed instrument consisting of thirty pairs of statements for each of the three objectives was administered during the first three weeks of school to 803 male junior and senior secondary school students. Tests were re-administered again during the last week of school to the same sample of students. Students were classified and data were analyzed according to (a) current enrollment and experience in industrial arts (b) socioeconomic status and (c) planned college attendance.

Findings and Conclusions:

The results of the study revealed that only one of the three objectives was being accomplished - "to develop an interest in industry". In addition to these findings, subsequent analyses indicated that (1) socioeconomic status has little to do with accomplishing any of the three objectives, (2) amount of industrial arts taken was related to accomplishing the "interest in industry objective" and (3) accomplishment of the three objectives was not related to planned college attendance. It was concluded that industrial arts course content must be revised to meet the stated objectives or that more realistic objectives be developed.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Densley (Last name), Kenneth (First name), Gordon (Middle name)

Exact Title DETERMINING DISCREPANCIES THAT MIGHT EXIST BETWEEN APTITUDE SELF-CONCEPT AND MEASURED APTITUDE

Degree granted Ed. D., Date 1967, No. of pages in report 172

Granted by Utah State University (Name of Institution) Logan, Utah (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine differences that exist between the students' aptitude and his perceived aptitude by using the General Aptitude Test Battery (BATB), The Skill Inventory (SI), and other factors such as the community size, socio-econcmic status, and general learning abilities on the students formulation of his aptitude test. A second consideration was the effect of these factors on occupational aspirations.

Source of Data and Method of Study:

Four instruments were used in the study:
1. The Aptitude Self-Concept Test Battery (Skill Inventory, developed by Dr. Walter Borg.
2. The GATB developed by the United States Employment Security Office.
3. The Occupational Aspiration Scale developed by Dr. Archibald O. Haller.
4. The Socio-Economic Scale develop by Dr. George A. Jeffs.

A pilot study of 124 students was given the tests listed, which was followed by testing 143 eleventh grade boys from three separate school districts.

Findings and Conclusions:

1. Above average students had occupational aspirations closer to their abilities than did the lower ability students.
2. Students of lower socio-economic status had lower self-concept than those of higher socio-economic status.
3. Occupational aspiration scores were lower in the low socio-economic students than those students of the higher socio-economic status.
4. Students of small communities would have higher ability self-concept than the actual ability than students from the larger communities.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author De Vore (Last name), Paul (First name), Warren (Middle name)

Exact Title Determination of Basic Learnings in Graphic Representations Essential to Employee Adaptation in Production Industries.

Degree Granted Ed. D. Date 1961 No. pages in report 199

Granted By The Pennsylvania State University (Name of Institution) University Park, Penn. (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To determine from the experience of supervisory personnel and production workers, in selected production industries in the Commonwealth of Pennsylvania, those areas of graphic representations most useful in adapting to employment changes resulting from technological innovations.

Source of Data and Method of Research: Research was conducted by use of a structured interview employing a series of 21 interview cards displaying basic types of graphic representations or types of mechanical drawings. The results of the study were based on 141 hour interviews. Twenty-eight different industries selected from 13 Department of Commerce Industrial Classifications cooperated by permitting interviews of 5 personnel classifications.

Findings and Conclusions: A definite hierarchy of usefulness of 21 classifications of graphic representations was discovered, for both present employment and training. Graphic representations determined useful for adaptation and training in the industries investigated were those determined as basic to job performance during present employment.

A common base of graphic representations was determined to exist among the diverse production industries investigated and a "true" rank order of graphic representations for both present employment and training existed for each skill level. A greater similarity than difference existed in the selection of graphic representations for various skill levels for both present employment and training.

A definite difference existed in the determined usefulness of graphic representations for each skill level investigated, and the higher the skill level the greater the established usefulness of selected graphic representations for both present employment and training.

The results of the research established that, for all respondent categories, there was no significant difference in the need or use of graphic representations by skill levels during training versus present employment. A tendency existed in the skilled production worker category to select graphic representations as being more useful for present employment than for training. A significant difference was established, by the unskilled production worker category, favoring the usefulness of graphic representations for training versus present employment.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ditlow (Last name), George (First name), H. (Middle name)

Exact Title THE COMPREHENSIVE INDUSTRIAL ARTS LABORATORY IN THE PREPARATION OF INDUSTRIAL ARTS TEACHERS FOR THE PUBLIC SCHOOLS.

Degree granted Ed. D., Date 1956, No. of pages in report

Granted by New York University (Name of Institution) New York City, New York (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a comprehensive industrial arts laboratory and identify implications for industrial arts teacher education programs.

Source of Data and Method of Study:

The survey and interview techniques were used to obtain information from industrial arts teachers, supervisors, and teacher educators pertaining to (a) the facilities of industrial arts programs (b) the experiences and backgrounds of the industrial arts staff and (c) the industrial arts students.

Findings and Conclusions:

A comparative analysis of the data revealed that (a) the aims and objectives of industrial arts programs were inconsistent (b) the facilities were inadequate (c) the content of courses was paralleling the instructors interest and experience and (d) the instructors used methods similar to the was they had been taught. In conclusion, the finding suggested that much remains to be done in the way of updating industrial arts programs through the effective use of in-service training and/or advisory committee consultants.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Dingman, Erwin, ______
(Last name) (First name) (Middle name)

Exact Title A HISTORY OF VOCATIONAL GUIDANCE IN HESSE, GERMANY, DURING THE UNITED-STATES OCCUPATION MAY 1945--1948.

Degree granted Ph. D., Date 1949, No. of pages in report 478

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine whether a redirection of German vocational education and vocational guidance occurred in Hesse, during the period of the U. S. Occupation from May 1945 to January 1948; to indicate discernible changes during the Occupation; and to evaluate results.

Source of data and method of study:

Predominantly historical, comparative, documentary, and analytical. Direct and indirect observations used, strengthened by virtue of being in Hesse during Occupation and being in a key educational position. The Thesis is presented in two parts. Part I traces history of German vocational education from 50 B. C. to 1945 through the use of secondary sources and translations from the Germans. Part II is mainly developed from primary sources.

Findings and Conclusions:

Identifies American and German agencies and persons charged with vocational guidance and vocational education. Defines the areas of education responsibility for the United States Military Government and for the appointed and elected German civil officials. Compares the aims and purposes of education and guidance as stated by the Military Government with those stated by the German civil government before and during the American Occupation. Traces changes in Military Government authority and policy in education as compared with changes in authority and policy which occurred in the German civil government. Studies Hessian response to Military Government directives. Traces trends and philosophies in German education and compares present philosophical concepts of education with those of the past. Studies enrollment figures and estimates in the various schools concerned with the vocational students. Analyzes the Hessian program for school reform in the light of the program visioned and prescribed by Military Government. Makes specific recommendations for developing democracy in Germany.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE -AIAA - ACIATE - NAITTE

Author Dirksen, Dennis, A.
(Last name) (First name) (Middle name)

Exact Title AN ANALYSIS OF THE ARTICULATION PROCEDURES REPATED TO THE TRANSFER OF THE TWO-YEAR COLLEGE STUDENTS TO FOUR-YEAR COLLEGE PROGRAMS OF INDUSTRIAL ARTS IN THE STATE OF KANSAS.

Degree granted Ed. D., Date 1969, No. of pages in report 129

Granted by Utah State University Logan, Utah
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate and analyze two and four year college Industrial Arts Education procedures in Kansa, so guidelines can be established that will aid transfer students when they transfer.

Source of Data and Method of Study:

Data was collected by interviews at all concerned colleges, both two and four year. Student records were examined to establish comparisons. Guidelines were prepared based upon available literature, interviews results, and student record information. Recommendations were based on the observed results of the study.

Findings and Conclusions:

1. Two year colleges limit industrial arts programs.
2. Kansas does not distinquish between native and transfer students.
3. Four year colleges do not agree on programs or cooperate with two year colleges enough.
4. Two and four year colleges would be more effective if, they exchange visits, plan together, have more effective counseling, and correlate with area schools.

Recommendations: More schools offer industrial arts, two year colleges offer four areas of study, limit students to 6 hours in each area, plus 4 introductory areas. Four year colleges list acceptable transfer courses, recruit from two year colleges, and promote continuing education for the two year students. The two year Kansas Colleges should act as a supportive force in industrial arts teacher education.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITE

Author Ditzler (Last name), Walter (First name), E. (Middle name)

Exact Title A REVIEW OF THE INFLUENCES BEARING ON THE DEVELOPMENT OF PROGRAMS IN INDUSTRIAL EDUCATION.

Degree granted Ph. D., Date 1953, No. of pages in report 323

Granted by University of Iowa (Name of institution) Iowa City, Iowa (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the influences bearing on the development of industrial education for 1857 to 1950, as shown in the Proceedings of the National Education Association.

Source of data and method of study:

Data were obtained by a historical survey of the papers, speeches and discussions included in the National Education Association Addresses and Proceedings.

Findings and Conclusions:

In the period 1857--1875, there were few references to industrial education. Matters such as object teaching and the need for free universal education were preparing the way for industrial education. During 1876--1900, discussions were concerned with the Russian system. Much discussion of manual training for general education versus training for economic purposes appeared. Emphasis was placed on the need for modifying instruction to adjust to conditions brought about by the industrial revolution. The formal exercises of manual training began to be questioned and the need for training in special industrial programs was pointed out. Colleges began to use shopwork in training engineers. Dual purposes for manual training were developing, one for general education and the other for vocational-industrial education. In the period 1901--1929, much emphasis was placed on training for work in industry. The programs of vocational training increased in number. The general education values of manual training received little support. During 1930--1950, a program of industrial arts based on problem solving and exploratory experiences gained increasing recognition. The demand for trained workers fell off during the middle of this period but it increased rapidly during and after World War II.

192

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Doane (Last name), Raymond (First name), Charles (Middle name)

Exact Title INDUSTRIAL EDUCATION IN SELECTED STATE SCHOOLS FOR THE DEAF.

Degree granted Ed. D., Date 1956, No. of pages in report 231

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the status and need for industrial education at State schools for the deaf of the upper Mississippi Valley region.

Source of Data and Method of Study:

Data concerning industrial education programs at schools for the deaf were obtained from official records, observation, and interviews. Data concerning the occupational status of male graduates of schools for the deaf were obtained through information forms mailed to them and to their employers. Ratings on occupational success of the graduates were obtained from the employers. Suggestions for the improvement of training programs were obtained from both groups of respondents.

Findings and Conclusions:

Guidance and placement services, an inservice teacher education program, on-the-job training, and up-to-date facilities are needed at schools for the deaf. The occupational success of graduates, in the trade for which they were trained, compares favorably with that of other employees who have been employed on similar jobs for approximately the same length of time; hence, employers need not be reluctant to employ deaf workers.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Dobson (Last name), Clifford (First name), George (Middle name)

Exact Title A STUDY OF APPRENTICES ENROLLED IN RELATED INSTRUCTION CLASSES IN CALIFORNIA PUBLIC SCHOOLS.

Degree granted Ed. D., Date 1956, No. of pages in report 287

Granted by University of California (Name of institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To gather and evaluate information on the characteristics of apprentices in the various apprenticeship programs in the State of California that would reveal the status of the program and provide an index for the measurement of future developments and trends.

Source of Data and Method of Study:

A questionnaire distributed to 1,610 selected apprentices enrolled in related instruction classes in the public schools of California. The sample included apprentices in 22 trades from 100 classes in 40 school districts.

Findings and Conclusions:

The apprentices in this survey were largely in their early twenties with a high school diploma, married, fathers, and from families of skilled workers. Most had heard little about apprenticeship training while in high school. Over 50 percent attended apprenticeship classes 2 nights a week. The California State Department of Education Instructional Materials Laboratory was said to have a strong influence on the program. Few of the group were recruited and selected on the basis of a well-organized program. Joint apprenticeship committees evaluated the progress of apprentices every 6 months.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Dodge, (Last name), Arthur (First name), Farwell (Middle name)

Exact Title OCCUPATIONAL ABILITY PATTERNS.

Degree granted Ph.D., Date 1935, No. of pages in report 97

Granted by Columbia University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

An historical study of vocational testing with emphasis on vocational abilities testing. It considers the mechanical use of vocational tests and the norms which should be used in developing occupational abilities patterns.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Doty (Last name), Charles (First name), Ransom (Middle name)

Exact Title THE EFFECT OF PRACTICE AND PRIOR KNOWLEDGE OF EDUCATIONAL OBJECTIVES ON PERFORMANCE

Degree granted Ph. D. Date 1968 No. of pages in report ________

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate and to provide evidence relevant to the effectiveness of two stategies of instruction as measured by immediate learning; 1) providing or withholding prior knowledge of educational objectives and 2) providing practice on the actual referent (object) and the symbolic referent (written description).

Source of Data and Method of Study:

In this study a completely randomized factorial design was used, R Y1 X Y2. Following this design the teachers randomly assigned the four treatments (combinations of the two main variables, knowledge of educational objectives, and practice on referents) to classes, administered a pretest, taught a rigidly structured instructional unit, and administered a post-test. Seven schools from a large city were sampled, one class from each school. There were 190 subjects sampled, 45 subjects received each of the four treatments.

Findings and Conclusions:

The evidence presented in this study points to the fact that the possession of prior knowledge of educational objectives before studying an instructional unit does increase the efficiency in student learning and that practicing on the actual referent rather than the symbolic referent produced some effect on learning but not a significant effect.

The inference was made that the schools do havediffering student populations and, therefore, the results of the study had generalizability. Of the other individual differences studies, e.g., age, interest, school grades, standardized test scores, or I.Q., only the student's industrial arts grade had a significant effect upon test scores obtained in this city.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Doutt (Last name), Richard (First name), F. (Middle name)

Exact Title AN EVALUATION OF SELECTED ELEMENTARY SCHOOL INDUSTRIAL ARTS HAND TOOLS--GRADES II, III, AND IV.

Degree granted Ed. D., Date 1965, No. of pages in report 102

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To evaluate selected industrial arts hand tools and one piece of equipment, the sawhorse workbench, in relation to body build and sex of second, third, and fourth grade students in order to determine those tools most suited to elementary school construction activities.

Source of Data and Method of Study:

Members of the American Council for Elementary School Industrial Arts were asked to select hand tools and equipment for use in this study. The skill tests were conducted with thirty boys and thirty girls on each of three grades levels. One hundred eighty students were weighed, measured, and categorized according to body size, with ten boys and ten girls in each of the three physical body build groups, advanced, normal, and retarded, for each grade level. The results of the tool operations were evaluated with apparatus designed and built for the experiment.

Findings and Conclusions:

For all three levels the 13 ounce hammer, the rigid frame coping saw, the 8 inch bit brace, the 3/8 inch hand drill, and the 18 inch crosscut saw were the most suitable.

For the second grade, the block plane and the 18 inch sawhorse were the most suitable.

The smooth plane and the 16 inch sawhorse were the most suitable for the third grade.

The fourth grade were the most suited for the 10 inch bit brace, the Jr. jack plane and the 18 inch sawhorse.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Downing, (Last name), Dallas (First name), Luke (Middle name)

Exact Title PROFESSIONAL IN-SERVICE IMPROVEMENT OF TRADE TEACHERS IN OHIO.

Degree Granted Ed.D., Date 1941, No. of pages in report 222

Granted by Indiana University (Name of institution) Bloomington, Ind. (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

An attempt to discover the influences and activities which, in the opinion of trade teachers in Ohio, have contributed most to their professional improvement after they began their teaching experience.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE — NAITTE — AIAA

Author Downs (Last name), William (First name), A. (Middle name)

Exact Title The Effect of Constructional Activities Upon Achievement in the Areas of Science and Mathematics at the Fifth Grade Level.

Degree Granted Ed. D. Date 1968 No. pages in report

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the relative effect of selected constructional activities upon the achievement of high and low ability male and female students in fifth grade science as well as concomitant outcomes in the area of mathematics.

Source of Data and Method of Research: This investigation was conducted as an experimental comparison of three approaches to teaching a fifth grade science unit on birds. The three approaches were: Method A, an experimental approach in which the students constructed a bird house designed to enrich the unit of science being studied; Method B, an experimental approach designed to enrich the curricular areas of social studies and mathematics in which the students constructed such objects as giant rulers, circular fractions, number lines, place value boxes, abaci, serving trays, and geometric figures; and Method C, the traditional approach which did not employ a constructional experience to enrich fifth grade curricular areas. A stratified random sample of 360 students from 18 elementary schools of the Kansas City, Missouri Public School District was involved in the study along with 24 teachers. The research procedure followed in the study was to adminster a pre-test, apply the three treatments over a five-week time interval, and then ascertain achievement by administering a post-test. Five weeks after the treatment was concluded a test of retention was administered to ascertain retention of content. In the absence of standardized instruments the researcher developed three objective examinations. The science items were submitted by the fifth grade teachers whereas the mathematics items were developed by the researcher.

Findings and Conclusions: Regardless of ability level, achievement scores of students in Group A were significantly higher than Groups B and C. Therefore, the constructional activities approach to teaching science at fifth grade level is more effective than the traditional approach. Constructional activities provide high ability students an opportunity for increased achievement in science as was proved by Groups A & B making significantly higher gains in achievement of selected science content. There was no significant difference in scores of male and female students.. Method A, as presented in this investigation, is judged to be a more effective method of teaching science content in the elementary school.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Drake, (Last name), Francis (First name), Owen, Jr. (Middle name)

Exact Title AN ANALYSIS OF THE WORK STUDY PROGRAM IN SELECTED MISSOURI SCHOOLS

Degree granted ____ Date ____ No. of pages in report ____

Granted by University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to describe and analyze the characteristics, operational features, and opinions held by school people and former participants concerning the Work Study Program conducted in Missouri schools under the provisions of the Vocational Education Act of 1963. Additionally, portions of data were analyzed to assess the extent to which school program operations were in compliance with selected state work-study guidelines.

Source of Data and Method of Study:

Data for the study were secured from these sources: (1) information concerning 132 participating schools, enrolling a total of 3,854 work-study participatns, gathered from the State Department of Education, school years 1964-67, (2) an interview schedule completed with program supervisors in 22 stratified randomly selected participating schools, (3) an information form completed by 185 superintendents of non-participating schools, and (4) an information form completed by 194 former work-study students.

Findings and Conclusions:

1. Because of non-participation among eligible schools, program benefits have not been available on an equitable basis to substantial numbers of financially needy vocational students over the state.
2. Work-study programs and students served by them have been located principally in rural Missouri, while metropolitan and inner-city vocational students have largely been unserved by the program.
3. Work-study students, as a group, represent a normal risk for occupational placement when compared to other secondary vocational graduates.
4. The program has not been used as an available school resource at the grade levels where drop-out rates are the highest.
5. Local supervisory practices have resulted in a majority of schools ignoring or neglecting state guidelines for: student selection, program objectives and evaluations, advisory committees and work agreements.
6. A majority of the students were provided the resemblant values of a labor force job and were assisted in the transition from school to the world of work.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Drazek, (Last name), Stanley (First name), J. (Middle name)

Exact Title FIELD EXPERIENCES IN TEACHER EDUCATION WITH RECOMMENDATIONS FOR INDUSTRIAL ARTS TEACHER PREPARATION.

Degree granted Ph.D., Date 1950, No. of pages in report 358

Granted by Univeristy of Maryland, (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To set forth the learning experiences provided by and the values accruing from directed field experience programs and to present elements of organizational plans and administrative procedures which tend to make a program successful.

Source of Data and Method of Study:

A survey of existing field programs in teacher education was made to determine their characteristics. Twelve institutions were contacted directly and data were drawn from conferences, observations, and written descriptions. Twenty-three other institutions were contacted by mail.

Findings and Conclusions:

The study presents 4 broad areas of possible field experiences: Industry, community, school, and child. Specific recommendations are made under each of the 4 areas as they related to industrial arts teacher-education programs. Under industrial experiences; visits and excursions to industry, work experience, and internship in industry are recommended. Under community field experiences; field trips, community study, and volunteer work in social agencies are suggested. Recommended school experiences include September field programs, and student assistantship or internship. Recommended experiences with youngsters include directed observations, and directed experiences in social agencies.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Drake, Lawrence, Coleman
(Last name) (First name) (Middle name)

Exact Title THE EFFECTIVENESS OF A SELECTED READABILITY FORMULA IN THE PREDICTION OF STUDENT SUCCESS WITH TECHNICAL AND NON-TECHNICAL READING MATERIALS.

Degree granted Ed. D., Date 1966, No. of pages in report 167

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the effectiveness of the Dale-Chall formula in the prediction of success with technical and non-technical reading materials by secondary level students.

Source of Data and Method of Study:

Two information sheets were made up for technical and two were made up for non-technical content. Selected seventh-graders were matched on sex, reading ability, scholastic aptitude, and pre-test scores. Differences were not considered significant unless they were equal to or exceeded the .05 level of confidence.

Findings and Conclusions:

1. The rewriting of material as assessed by the Dale-Chall readability formula does not appreciably aid comprehension of 7th graders.
2. The readability as assessed by the Dale-Chall formula does not significantly affect reading speed.
3. Female learners comprehend and retain non-technical material better than male learners.
4. Male learners comprehend and retain technical material better than female learners.
5. Generally learners with higher reading abilities will achieve more than lower achievers.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Duffy, Joseph, W.
(Last name) (First name) (Middle name)

Exact Title A GUIDE FOR THE FABRICATION OF PUPIL MADE DIORAMAS IN THE JUNIOR HIGH SCHOOLS OF NEW YORK CITY.

Degree granted Ed. D., Date 1958 No. of pages in report

Granted by New York University New York City, New York
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a guide for the fabrications of pupil made dioramas for junior high school social studies units of instruction.

Source of Data and Method of Study:

A review of the literature, together with visitations to museums and manufacturers, provide the basic information necessary to develop a step-by-step fabrication procedure to include lists of materials, tools and related information. The efficiency and/or effectiveness for using the guide was beyond the scope of this investigation.

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Duncan (Last name), Glenn (First name), Spencer (Middle name)

Exact Title PRACTICAL ARTS ACTIVITIES EMPLOYED BY ELEMENTARY CLASSROOM TEACHERS AND THEIR DESIRABILITY FOR TEACHER EDUCATION.

Degree granted Ed.D., Date 1950, No. of pages in report 316

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To discover what is being done with practical arts activities in the elementary school by superior teachers; to ascertain what practical arts experiences, superior teachers and other competent authorities think are needed in teacher education; and to suggest some implications of the above for elementary teacher education.

Source of Data and Method of Study:

Information forms were sent to the following elected respondents: 266 elementary classroom teachers, 148 elementary principals or supervisors, 168 critic teachers, and 46 authorities (writers). The responses of these 622 individuals from over the nation comprised the data for this study.

Findings and Conclusions:

Teachers who had college work beyond a master's degree were the most consistent users of practical arts activities. Those with less than 5 semester hours of practical arts subjects did little or nothing in utilizing them, and they had the least desirable room set-up for conducting their activities, while those with the most special training used the activities the most frequently in providing the preferred physical arrangements and obtaining budgetary allowances for materials. As the grade level increased there was a tendency for more practical arts activities to be used. Certain criteria which respondents have repeatedly urged to be kept in mind in using practical arts activities in the elementary program are: Practical arts activities must not be ends in themselves, but support the teaching unit; construction must be simple and not involve intricate skills; constructions must be representative of whatever is being portrayed and not something distantly removed; and constructions must be successful to give the learner the necessary motivating satisfactions. Methods of directing practical arts activities that were preferred by 50 percent or more of the respondents were: Cooperative planning by teacher and pupils; construction of separate group projects; construction of central group projects, such as a farm, store, stage set, etc.; construction of different individual projects; and working sketches and procedures prepared jointly by teacher and pupils.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Edmunds (Last name), Niel (First name), A. (Middle name)

Exact Title THE IDENTIFICATION OF TRADE AND INDUSTRIAL EDUCATION PROGRAMS AND THE PROBLEMS RELATING TO THE IMPLEMENTATION OF THESE PROGRAMS IN SMALL HIGH SCHOOLS.

Degree granted Ed. D. ,Date 1969 ,No. of pages in report 136

Granted by Utah State University (Name of Institution) Logan, Utah (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The study identified the characteristics of existing trade and industrial education programs or courses in small high schools and obtained the rank order of the problems relating to implementation.

Source of Data and Method of Study:

The study used a random proportionate sample of schools enrolling 300 or less students, grades nine through twelve, located in the states of Colorado, Idaho, Montana, Utah, and Wyoming. Questionnaires were sent to 150 superintendents asking for information concerning the characteristics of existing offerings and the ranking of the problems of implementing trade and industrial programs.

Findings and Conclusions:

Characteristics:

1. Few trade and industrial programs (T.& I.) with auto mechanics and carpentry most popular,
2. Most courses were taught two semesters to eleventh and twelfth graders jointly,
3. Most instructors were state certified with less than six years experience,
4. two-thirds of the schools received state aid and one-third received federal aid,
5. very few advisory committees were used.

Problems:

1 Administrators are unable, unwilling, or uninterested in devloping T. & I. programs and fail to understand and interpret laws concerning courses for the handicapped,
2. There is a need for improved communications to further T.& I.,
3. Courses in the surveyed schools are similar to courses on the national level,
4. Whether or not the school offers T. & I. does not influence problem rating but does influence alternate program selection,
5. School size does not influence problem rating but does influence program selection,
6. The majority of existing courses meet basic requirements,
7. T. & I. offerings must fit the needs and conditions of the students and the community.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Eddy, Evan, Max
(Last name) (First name) (Middle name)

Exact Title GENERAL RELATED INSTRUCTION NEEDED BY STUDENTS IN COOPERATIVE OCCUPATIONAL TRAINING.

Degree granted Ed. D., Date 1956, No. of pages in report 154

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the general related instruction currently provided students in cooperative occupational training, the importance of the instruction in terms of the needs of cooperative trainees, and additional instruction needed but not currently provided.

Source of Data and Method of Study:

General related instructional materials from 10 States were assembled and analyzed for instruction topics, which were placed in an information form and evaluated by respondents representing eight populations--local employers, former trainees, local coordinators, local labor leaders, personnel directors, regional labor leaders, coordinators from several States, and teacher educators and State supervisors. The report was based upon 706 completed forms representing 29 States. Respondents wrote in the topics of additional needed instruction.

Findings and Conclusions:

In general, instruction topics concerned with choosing and preparing for a career, getting and adjusting to the job, personality and personal progress, and employer-employee relations were considered of greatest importance. Less importance was attached to topics concerning labor laws, problems of management and business ownership, and labor unions. Topics were rated highest by local coordinators, local labor leaders, and former trainees; teacher educators and State supervisors, personnel directors, and regional labor leaders were more critical of current instruction. Concern was expressed about duplication in related classes of instruction offered in general education classes. A need was indicated for an expansion of the instruction concerning employer-employee relations. Areas of instruction that have implications for guidance and counseling were considered most important and it was indicated that coordinators should have professional training in guidance and counseling to perform their duties effectively.

206

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ecker (Last name), Louis (First name), Gene (Middle name)

Exact Title THE STATUS AND PROJECTION OF A TEACHER EDUCATION PROGRAM IN POWER TECHNOLOGY.

Degree granted Ph. D. Date 1965 No. of pages in report--312

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the status of industrial arts laboratory courses in power mechanics at selected teacher education institutions throughout the United States and to project a program in power technology consistent with selected criteria.

Source of Data and Method of Study:

Data for this study were obtained through a descriptive survey sent to educators actively involved in preparing teachers with technical skills and knowledge relative to this program. The universe of this study was identified by the use of a preliminzry survey involving 206 teacher education institutions. A total of 96 insitituions were identified as offering instructional programs in power mechanics. A jury of experts and a pilot study were used to validate the survey instrument.

Findings and Conclusions:

1. The power mechanics program has its orgin in the 1930's, although major program developments have taken place since 1960.
2. The applied science approach to curriculum development has made the most significant and direct contribution to the systematic organization of content included in this program.
3. The power mechanics program involves a study of all energy sources and machines that convert energy into useful work. This program should not be confused with the specialized automotive program.
4. Major instructional units included in 70 percent or more of the teacher education programs surveyed include small gasoline engines, power measurement, mechanical power transmission, and diesel engines.
5. Basic understandings in the physical and mathematical sciences are essential in the preparation of power mechanics teachers.
6. The power mechanics program should emphasize the understanding of operational fundamentals and scientific principles involved in each energy source studied.
7. The proposed power technology program outlined in this study provides a detailed technical content outline for each of the energy sources employed in prime movers. Fifty scientific principles have been identified which directly apply to one or more of these sources of power.

207

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Eaton (Last name), Merrill (First name), Thomas (Middle name)

Exact Title A CURRICULUM IN HOME PLANNING, BUILDING AND MAINTENANCE.

Degree granted Ed.D., Date 1932, No. of pages in report 444

Granted by Indiana University (Name of institution) Bloomington, Indiana (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An analysis of the problems of home planning, building, and maintenance that are essential to home-owners and prospective home-owners of the "middle-class." These data are used as a basis for a curriculum for high school boys and girls in home planning, building, and maintenance.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Earle, James, H.
(Last name) (First name) (Middle name)

Exact Title AN EXPERIMENTAL COMPARISON OF THREE SELF-INSTRUCTION FORMATS FOR DESCRIPTIVE GEOMETRY.

Degree granted Ed. D., Date 1964, No. of pages in report

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to experimentally determine which of four methods of presenting descriptive geometry problems required the least comprehension time. The four methods were (1) the convention method (textbook) (2) the step method (3) the step method with color and (4) the lecture method.

Source of Data and Method of Study:

Six descriptive geometry principles were presented experimentally to 503 Texas A&M University students. The treatments were provided, tests were administered, and student preferences for the methods of instruction were obtained at the completion of the study.

Findings and Conclusions:

The findings indicated that both the step methods of instruction were superior to the convention (textbook method on the first three unit tests administered, but there were no differnces between the two step methods. On the second set of three tests, the step methods and the lecture method were found to be superior to the conventional method with the step method using color being the most effective of the three methods. It was therefore, concluded that the step method with color required the least time for comprehension and was followed in order by the step method without color and the lecture method respectively. The conventional method required, in all cases, the most time for comprehension.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Earhart (Last name), Cecilia (First name), Ruth (Middle name)

Exact Title REQUIREMENT FOR VOCATIONAL TEACHER TRAINING AND CERTIFICATION IN TRADES AND INDUSTRIES IN THE VARIOUS STATES AND TERRITORIES.

Degree granted Ed.D., Date 1946, No. of pages in report 208

Granted by University of Cincinnati (Name of institution) Cincinnati, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An analysis and comparison of the certification requirements of the vocational teacher-training programs in trades and industries of the several States and Territories; including eligibility requirements, pre-employment and in-service training courses, qualifications of supervisors and teacher trainers, and organization of courses.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Dykehouse (Last name), Jay (First name), (Middle name)

Exact Title DUALISM IN AMERICAN PUBLIC EDUCATION SINCE 1906, WITH SPECIAL REFERENCE TO THE VOCATIONAL EDUCATIONAL MOVEMENT.

Degree granted Ph.D., Date 1950, No. of pages in report 306

Granted by University of Michigan (Name of institution) Ann Arbor, Michigan (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To present the beliefs, attitudes, purposes and educational philosophy of certain persons, groups and organizations active in the promotion of Federal and State legislation for vocational education, from approximately 1906 to present.

Source of Data and Method of Study:

The data of the investigation were obtained from letters, interviews and documents concerning the educational philosophies and plans of groups working on legislation for vocational education. A special study of dualism in Wisconsin was made by correspondence with educators in that State.

Findings and Conclusions:

The findings indicated that many of the early leaders in the vocational education movement, especially the writers of the Douglas and Wisconsin reports, had in mind a dual system of schools similar to that operating in Germany. The results also indicate that the vocational educational movement was sponsored primarily by economic rather than by educational groups. The refusal of the academic educators to meet demands for vocational education forced other groups to obtain national legislation, hence, the Smith-Hughes Act in 1917. Over 32 years of Smith-Hughes and related legislation reveals two trends with respect to vocational education. One is a trend toward State and Federal control, which combined with other factors leads to a separation of vocational from general education. The other is a growing commitment to a unified approach which combines vocational education in an integrated program of instruction, which is a stronger trend than that toward dualism.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - NAITTE - ACIATE

Author Dyke (Last name), Eugene (First name), L. (Middle name)

Exact Title AN INVESTIGATION OF CERTAIN FACTORS FOR PREDICTING SUCCESS IN COLLEGE ENGINEERING DRAWING.

Degree granted Ed.D., Date 1962, No. of pages in report 91

Granted by Colorado State College (Name of institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To investigate the relationship of student performance in mechanical drawing courses with success in engineering drawing courses as based on the grade received in mechanical drawing, cumulative grade point average in mechanical drawing (GPA), and number of semesters of mechanical drawing in high school, certain test scores from the American Council on Education Psychology Examination for High School Students (ACE) and the Pre-Engineering Abilities Test Form ZPA (PEAT).

Source of Data and Method of Study:

Data were obtained on 496 graduates from public and parochial high schools located within the city limits of Sacramento, California, who had enrolled as freshmen in the Engineering Division at Sacramento City College during the fall term of 1957 through the spring term of 1961. Information supplied by the college included the Q-score, L-score, total Q- and L- score on ACE, PEAT-score, and engineering drawing grade. Data taken from the high school transcripts included the mechanical drawing grades, the GPA, and the number of semesters of mechanical drawing.

Findings and Conclusions:

Findings in the study for students with mechanical drawing indicated that an increase in GPA in mechanical drawing tends to accompany a little increase in the engineering drawing grades.

For students without mechanical drawing the PEAT test score with a correlation of 0.665 proved to be the most reliable indicator of probable success in engineering drawing.

For the total group with and without mechanical drawing, the PEAT test score and the two ACE test scores, total Q- and L-score and the Q-score show positive relationship to engineering drawing grades. The relationship in each case is more significant for the students without mechanical drawing than it is for students with mechanical drawing in high school.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Dutton (Last name), Bernard (First name), (Middle name)

Exact Title A STUDY OF TELEVISION FOR INSTRUCTION IN INDUSTRIAL ARTS EDUCATION

Degree granted Ed.D. Date 1966 No. of pages in report 241

Granted by University of California, Los Angleles (Name of institution) Los Angeles, California (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the feasibility of utilizing television for instructional purposes in Industrial Arts Education by identifying the uses of the media that are adaptable to this phase of education. The study was limited to the sequence of education designated as secondary.

Source of Data and Method of Study:

The method of investigation utilized was of the descriptive survey type. The data were obtained from: (1) a review of published and unpublished literature, (2) a series of visits and observations in schools and military installations utilizing television, and (3) personal contact and contact by mail with individuals in the field. Advantages and disadvantages, present philosophies, and effective techniques were identified.

Findings and Conclusions:

1. Television was found to have both advantages and disadvantages when utilized for instruction in Industrial Arts. These could be characterized as technical and operational.
2. It was found that all subject froups in I.A. can benefit from the application of television but that some areas benefit more than others.
3. Instruction can benefit by application of television either as a direct visual aid to the instructor within a single classroom or as a medium to present primary or supplemental instruction originating outside of the classroom. The single classroom concept appeared to be the simplest and least expensive means of utilizing television, however, television reaches its true potential only in a fully planned and coordinated studio approach.
4. Any types of utilization can only be effective through staff acceptance and their awareness of the objectives of the programming and the capabilities of the medium.
5. In the establishment of a program of instructional television in the Industrial Arts area, certain critical aspects must be considered during the initial implementation of the program. They are: (a) the level and objectives of the program, (b) the in-service training program, (c) the prodecure for the establishment of program and course content, (d) the selection of subject matter to be televised, (e) the selection of personnel, and (f) the method of evaluation.

SOURCE SHEET FOR SUMMARIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Dunlap (Last name), Eugene (First name), W. (Middle name)

Exact Title AIMS FOR MANUFACTURING PROCESSES IN UNDERGRADUATE ENGINEERING EDUCATION AS EVALUATED BY PROFESSIONAL ENGINEERS IN THE GREATER ST. LOUIS AREA

Degree granted Ed. D. Date 1962 No, of pages in Report 343

Granted by Wayne State University (Name of Institution) Detroit, Michigan (City, State)

Where Available: Microfilm (X) Microfiche ( ) L.R.I.C. ( )

Purpose of Study:

To provide for a review of the over-all declared aims for manufacturing process as published for engineering colleges with ECPD accredited programs in chemical, civil, electrical, industrial, mechanical, and metallurgical engineering.

Source of Data and Method of Study:

A review of the literature pertaining to manufacturing processes was undertaken. The proposed aims were evaluated through personal interviews and the use of an instrument for tabulating data and recording responses. Thirty-six firms were chosen by the random sampling method so that the six engineering classifications were equally represented.

Findings and Conclusions:

1. The study of manufacturing processes as a program of engineering education may well be oriented in conformity with the results of the evaluated proposed aims, and that the scope for manufacturing processes is adequately encompassed by the ten projected aims that are being promulgated.
2. The trend of eliminating manufacturing processes from engineering curricula was contrary to the desires and professional opinions of the majority of the professional practicing engineers interviewed.
3. The review of professional engineering educational reposrts revealed serious variance and disagreement in engineering circles regarding the aims for manufacturing processes in undergraduate collegiate education.

Ten proposed aims for manufacturing processes by practicing engineers in industry were set forth in the dissertation.

214

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Eisenberg (Last name), William (First name), L. (Middle name)

Exact Title SUPERVISORS' EVALUATIONS OF THE QUALITIES ESSENTIAL TO THEIR POSITIONS.

Degree granted Ed. D., Date 1947, No. of pages in report 140

Granted by Temple University (Name of institution) Philadelphia, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Eight hundred and seventy-four supervisors employed in fifty-two different organizations were asked to rank twenty-five qualities needed by co-ordinating supervisors and front-line supervisors.

Source of data and method of study:

Findings and Conclusions:

215

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Eiss (Last name), Albert (First name), F. (Middle name)

Exact Title A DETERMINATION OF THE RELATIVE IMPORTANCE OF KNOWLEDGES OF SCIENCE TO THE DUTIES OF HOTEL MANAGERS.

Degree granted Ph.D., Date 1954, No. of pages in report 161

Granted by New York University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To identify and classify under their proper subject matter headings the scientific knowledge that hotel managers need in performing their duties.

Source of Data and Method of Study:

Data were obtained from periodicals, textbooks, and a survey of the duties of hotel managers in 75 hotels in New York State.

Findings and Conclusions:

There was a wide variation in the extent to which the various hotel managers performed duties requiring knowledge of science, but in most cases considerable knowledge of science was needed. A total of 640 scientific items were identified. Knowledge related to health and safety was of paramount importance. Most of the informational items were classified under the subjectmatter headings of physics and bio-chemistry.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Elder, Walter, Treadway
(Last name) (First name) (Middle name)

Exact Title A STUDY OF INDUSTRIAL ARTS IN PENNSYLVANIA

Degree granted Ph.D., Date 1941, No. of pages in report ____

Granted by University of Pittsburgh Pittsburgh, Pennsylvania
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A state-wide study to determine the present offerings and needs for industrial arts in Pennsylvania. Recommendations for improvement are offered.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Ellington, Mark, (Last name) (First name) (Middle name)

Exact Title DETERMINING THE PROFESSIONAL COURSES IN A TECHNICAL INSTITUTE CURRICULA

Degree granted Ph. D, Date 1936, No. of pages in report 285

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This study involved the selection of professional course content for a technical institute's curricula so that the curricular materials will give assistances in the promotions of optimum individual growth.

Source of data and method of study:

This dissertation was an outgrowth of a curriculum revision program carried on at the Rochester Athenaeum and Mechanics Institute. A survey of the community needs was used to revise the curriculum at the institute.

Findings and Conclusions:

A practical technique was developed for surveying the needs of the community. New devices were developed for allocating activities to subjects and topics, thus validating course materials and making possible the transition from the raw material of the activity analysis to the activity analysis to the units within the course.

218

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Elliott (Last name), Charles (First name), Arthur (Middle name)

Exact Title AUDIO-VISUAL MATERIALS USED IN INDUSTRIAL EDUCATION IN THE SECONDARY SCHOOLS OF ILLINOIS.

Degree granted Ed. D., Date 1958, No. of pages in report 135

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the use and value of audio-visual materials and the administration thereof in industrial education in the secondary schools of Illinois; to interpret from authoritative sources the accepted practices in the use and administration of audio-visual materials and to ascertain the extent to which industrial education instructors are following these accepted practices; and to determine the implications, if any, of the above for teacher training programs.

Source of data and method of study:

Data on the use and value of audio-visual materials and the administration thereof were obtained from information blanks completed by 431 respondents representing 261 schools. Data on accepted practices were taken from authoritative writings in texts, handbooks, research reports, bulletins, brochures, organizational publications, and current periodical literature. A comparison was made of the findings and accepted practices.

Findings and Conclusions:

Audio-visual materials were being used to varying degrees in industrial education programs. A majority of the materials were considered of value and highly desirable for use in industrial education. Few facilities seem adequate for extensive use of these media. The accepted practices in the use and administration of audio-visual materials have been followed in most cases. To obtain satisfactory and extensive use of audio-visual materials, an organized and guided program must be established and maintained. Sufficient emphasis has not been given to training industrial education instructors in both pre-service and in-service training programs in the preparation, use, and administration of audio-visual materials.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Ellis (Last name), Neil (First name), Gilbert (Middle name)

Exact Title) AN EXPERIMENTAL COMPARISON OF THE CONSTRUCTION METHOD AND WORKBOOK METHOD OF TEACHING DRAFTING.

Degree granted Ed. D., Date 1966, No. of pages in report 275

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to ascertain the relative effectiveness of the construction method and the workbook method of teaching drafting at the college level.

Source of Data and Method of Study:

Data was obtained from two groups involved in a rotation-group type of experiment with the method of teaching drawing as the experimental factor.

Findings and Conclusions:

1. The construction and workbook method seem to be equally effective in regard to information acheivement.
2. It appears the workbook method is slightly more effective in developing skills.
3. The two methods are equal in regard to spatial relationships.
4. The students have the same attitude toward both methods.
5. Intelligence seems to have no significant effect on informational achievement.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Engelbrektson, Sune,
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL ARTS: ITS APPLICATION TO ASTRONOMY

Degree granted Ed. D., Date 1961, No. of pages in report

Granted by New York University New York City, New York
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop projects dealing with the area of astronomy which has relevance to the industrial arts curriculum.

Source of Data and Method of Study:

Written materials (i.e. textbooks, syllabi, etc.) were used as the basic source of data from which astronomy projects were selected and later submitted to a jury of experts for assessing their difficulty, importance, and relevance to junior high school programs. A resource unit was developed and included simplified versions of projects, together with an integration of astronomy and industrial arts content.

Findings and Conclusions:

The conclusions of this study suggest that industrial arts content must be concerned with changes of attitudes about the broader field of industrial and scientific applications of knowledge. This study represents one such attempt to integrate science with industrial arts.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author English (Last name), Robert (First name), W. (Middle name)

Exact Title A GUIDE FOR THE PLANNING OF SCHOOL BUILDINGS FOR VOCATIONAL INDUSTRIAL AND VOCATIONAL TECHNICAL PROGRAMS OF EDUCATION.

Degree granted Ed. D., Date 1950, No. of pages in report 236

Granted by The Pennsylvania State College (Name of institution) State College, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop material which can be helpful as a guide to school administrators, teachers, and architects who are planning facilities for vocational industrial and vocational technical education.

Source of data and method of study:

Review of existing literature and survey of existing and desired facilities in vocational industrial and vocational technical high schools in New York State.

Findings and Conclusions:

Chapter 4 of the dissertation presents a proposed guide for school men and architects who plan buildings for industrial and technical education. Since the guide is lengthy and detailed, pertinent principles are summarized in the form of a series of 54 principles dealing with specific areas such as school shops, classrooms, toolrooms, storage rooms, locker space, toilet facilities, and the like.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Ensman, Leo, M.
(Last name) (First name) (Middle name)

Exact Title RELATION OF INTERESTS, ABILITY, COURSES TAKEN, SCHOLASTIC ACHIEVEMENT, AND OTHER FACTORS TO SUCCESS IN INDUSTRIAL ARTS TEACHING.

Degree granted Ed. D., Date 1957, No. of pages in report 139

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relation between teaching success as rated by supervisors of 110 beginning industrial arts teachers graduated from Kansas State Teachers College, Pittsburg, and factors such as general and precollege background, college preparation, selected interests, mental abilities, and the school, community, and teaching assignment.

Source of Data and Method of Study:

Data secured from records in several offices at Kansas State Teachers College were tabulated and chi-square tests calculated.

Findings and Conclusions:

The beginning teacher group was rated as quite successful. Individuals with high marks, greater number of hours in various areas, and other factors concerning college preparation received highest ratings. Interests, mental abilities, and general and precollege background, taken separately, had little or no relation to teaching success. Teachers with science minors and those who began teaching in schools with an enrollment of under 500 received significantly higher ratings. Successful, as well as unsuccessful, teachers seemed to be leaving the teaching profession. The factors studied, in combination, or other factors, not identified, appeared to be affecting the ratings more than these same factors taken separately.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Entorf, John, Frederick
(Last name) (First name) (Middle name)

Exact Title AN EXPERIMENT TO DETERMINE THE EFFECTIVENESS OF VIDEO-TAPED CLOSED CIRCUIT TELEVISION IN TEACHING SELECT WOODWORKING UNITS.

Degree granted Ed.D., Date 1967, No. of pages in report ____

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the effectiveness of video-taped, closed circuit television in teaching related technical information units and to identify instructional unitys particularily suited to video-taped presentations.

Source of Data and Method of Study:

The content validity of four units of woodworking were evaluated by a jury of experienced teachers and were video-taped. A total of 153 students enrolled in six sections of beginning woodworking were randomly assigned to experimental and control groups. The criteria used for the study were initial learning, retention and attitude towards the treatment.

Findings and Conclusions:

The findings indicated that in almost all cases, students receiving the video-taped presentation had higher scores on tests of initial learning and retention than the control group. However, when students were asked which method of instruction they preferred, a significant proportion of them favored the lecture method to the video-taped presentation. It was concluded that while the video-taped presentation proved to be superior to the lecture method of instruction, students tended to object to video-taped presentations.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Evans (Last name), Wilson (First name), Arnold (Middle name)

Exact Title INCREASING THE EDUCATIONAL VALUES OF THE BEREA COLLEGE WORK PROGRAM.

Degree granted Ed.D., Date 1954, No. of pages in report 182

Granted by Columbia University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To plan and carry out a change in a practical education situation. To develop and put into effect policies and procedures which would cause students to derive greater educational benefits from their work.

Source of Data and Method of Study:

Data were secured through a study of work programs in other colleges and Berea College, a literature survey, and a study of Student Personnel Administration and courses of study.

Findings and Conclusions:

Work program should continue with greater emphasis on educational values; personal practices should be made more effective and human resources used more advantageously with improvement of administrative policies and procedures.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Evans (Last name), Rupert (First name), Nelson (Middle name)

Exact Title A STUDY OF PSYCHOLOGICAL FACTORS AFFECTING MICROMETER MEASUREMENT.

Degree Granted Ph. D., Date 1950, No. of pages in report 74

Granted by Purdue University (Name of institution) Lafayette, Indiana (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the possibilities of using micrometers as measuring instruments instead of gage blocks in the mass production of close fitting, interchangeable parts, and to determine the variations in the use of micrometers by individuals and the training needed to overcome these variations.

Source of data and method of study:

Difference limens (thresholds) for torque discrimination for 37 college students were compared with torque required for zero micrometer measurements. Accuracy of 28 journeymen and 32 apprentice toolmakers and machinists was determined, and divided into reading accuracy and setting accuracy. The accuracy of use of personal and of unfamiliar micrometer was compared. A brief training program in micrometer measurements was established using five college students as subjects.

Findings and Conclusions:

The accuracy of micrometer measurements may be expressed in at least four ways, but these four measures of accuracy do not correlate well with each other. Errors in micrometer measurements made by skilled workers are considerably larger than is assumed by most authorities in the field, with the standard deviation of errors being remarkably constant at about .000227". The average error (absolute) for the industrial population studied was .00015". Measurements made by apprentices are apparently as accurate as those made by journeymen, and accuracy of measurements seems not to be significantly correlated for either group with age, amount of experience with the company, or length of time on the present job. There is apparently a tendency to underestimate the size of pieces measured with the one inch vernier micrometer, by about .00002". In the population studied, the low difference limen for torque discrimination suggests that micrometers can be adjusted much more accurately than is usually the practice in industry. A short training program based primarily upon knowledge of results is effective in decreasing the gross size and variability of errors to approximately one-third that of the toolmakers and apprentices tested. The decrease in gross size and variablity of errors brought about temporary, suggesting that workers should be given training immediately before being expected to make accurate micrometer measurements.

226

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Evans (Last name), Harry (First name), Leo (Middle name)

Exact Title MEXICAN SILVERSMITHING, A STUDY OF HISTORICAL AND CONTEMPORARY CONTRIBUTIONS PERTINENT TO INDUSTRIAL ARTS.

Degree granted Ed. D., Date 1953, No. of pages in report 400

Granted by University of Florida (Name of institution) Gainesville, Florida (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To emphasize the relationship between the worth of the individual, the quality of craftmanship, and the character of the civilization involved.

Source-of data and method of study:

Data were obtained by experience in silversmithing, research in the Library of Congress, and study in Mexico.

Findings and Conclusions:

If education is to be useful, there must be some working relationship between culture and skill. The most skillful and successful silversmiths are those who have interpreted their cultural heritage in such a manner as to make the past serve the future. Recommendations are made concerning the teaching of the silversmith's craft in industrial arts.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Evancho, (Last name), Michael (First name), ________ (Middle name)

Exact Title PREDICTING TRAINING AND EMPLOYMENT SUCCESS OF ELECTRIC ARC WELDERS.

Degree granted Ph.D., Date 1947, No. of pages in report ________

Granted by Univiersity of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This study covered the employment records of 321 welders who were employed and trained by the Dravo Corporation, Pittsburgh, Pa. Comparisons were made between success on the job and achievement in the welding course.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Estabrooke (Last name), Edward (First name), C. (Middle name)

Exact Title SAFETY AND HEALTH INSTRUCTION AND PRACTICE IN SCHOOL SHOPS.

Degree granted Ed. D., Date 1939, No. of pages in report 238

Granted by Pennsylvania State College. (Name of institution) State College, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of health and safety instruction practiced by 272 industrial arts teachers and 70 vocational industrial teachers in Pennsylvania school shops. A large number of items dealing with safety and health instruction in shops were checked to discover those phases being taught, those not taught but recommended, and those not recommended.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Erickson (Last name), Richard (First name), Charles (Middle name)

Exact Title A COMPARISON OF THE VISUAL-HAPTIC APTITUDES AS THEY RELATE TO STUDENT-TEACHER INTERACTION IN THE TEACHING-LEARNING PROCESS ASSOCIATED WITH BEGINNING MECHANICAL DRAWING.

Degree granted Ph. D., Date 1966, No. of pages in report 130

Granted by Purdue University (Name of Institution) Lafayette, Indiana (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. To determine what degree, if any, the visual haptic orientation of the mechanical drawing teacher interacts with his students' visual-haptic orientations in such a way as to affect their classroom achievement.
2. To gather additional empirical evidence to determine whether student visual-haptic aptitude is as significant a factor in achieving success in mechanical drawing as was indicated by the findings in the earlier investigation.

Source of Data and Method of Study:

All subjects in the experiment were members of the eighth grade classes enrolled at three junior high schools in a city school system. The actual sample consisted of 327 males; each was enrolled in a section of a common nine-week beginning mechanical drawing course taught at all the junior high schools in the system. The schools and classes used in the experiment were selected so that both the number of subjects enrolled under the participating teacher at each school and the variation in the distribution of these teachers' scores on tests for visual-haptic aptitude were maximized.

Findings and Conclusions:

1. There is no interaction between or among the three personal characteristics investigated that significantly affects student achievement in beginning mechanical drawing.
2. The mean level of student achievement appeared to be significantly affected by and directly related to the visual-haptic orientation of the student.

230

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Erickson (Last name), John (First name), Howard (Middle name)

Exact Title RECOMMENDED EQUIPMENT REQUIREMENTS FOR COMPREHENSIVE GENERAL SHOPS BASED ON CERTAIN INDUSTRIAL ARTS ACTIVITIES FOR THE JUNIOR HIGH SCHOOL.

Degree granted Ed.D., Date 1953, No. of pages in report 128

Granted by The Pennsylvania State University (Name of institution) University Park, Penn. (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To arrive at scientifically determined quantities of equipment for junior high school general shops based on certain industrial arts activities and objectives.

Source of data and method of study:

Data were obtained from a nation wide survey of 223 selected teachers of industrial arts.

Findings and Conclusions:

The quantities of equipment considered essential is given for the areas of electricity, graphic arts metalwork, and woodwork. Items considered useful are presented as general equipment. Industrial arts aims stressed in general industrial arts seems to have little affect upon the equipment recommended for such a shop.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ephraim, John,
(Last name) (First name) (Middle name)

Exact Title STATUS OF AND A PROPOSED PROGRAM FOR INDUSTRIAL ARTS IN THE PUBLIC SECONDARY SCHOOLS OF TENNESSEE WITH IMPLICATIONS FOR TEACHER EDUCATION.

Degree granted Ed.D. Date 1969 No. of pages in report

Granted by University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. To ascertain the status of industrial arts teachers and programs in the public secondary schools of Tennessee,
2. To determine a desirable secondary school industrial arts program for Tennessee,
3. To point out the implications for industrial arts teacher education at East Tennessee State University, Johnson City.

Source of Data and Method of Study:

Data for the study were secured from publications of the Tennessee State Department of Education and information forms completed and returned by approximately eighty percent of the 394 industrial arts teachers of Tennessee. The desirable industrial arts program was determined by a jury of 103 industrial arts educators and supervisors from the southeastern United States through the use of a rating scale. Subject matter speicalists rated instructional units for the highest ranked industrial arts subject matter areas for both the junior and senior high school.

Findings and Conclusions:

1. Since industrial arts courses were not available to a large portion of the secondary school students of the State, and since there was a shortage of teachers and the existing programs generally received poor financial support and were narrow is scope, it seems apparent that the industrial arts program in Tennessee was not adequate.
2. Inasmuch as the overwhelming proportion of the industrial arts teachers of Tennessee held the highest level of certification awarded by the State, and a large majority of them had undergraduate majors in industrial arts and were experienced teachers, it would appear that these teachers would be able to implement an improved program of industrial arts if provided the necessary resourced, direction, and in-service training.
3. The industrial arts teacher education program at East Tennessee State University was adequate to prepare teachers for the "desirable program" as outlined by the jury of industrial arts specialists. However, it was inadequate in terms of the number of teachers graduated annually in comparison with the number needed, and unsatisfactory with respect to the administrative structure of the student teaching program.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Enzian (Last name), Harold (First name), James (Middle name)

Exact Title INDUSTRIAL ARTS AS ENCOURAGEMENT FOR DISADVANTAGED YOUTH.

Degree granted Ph. D. Date 1967 No. of Pages in Report

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine if Industrial Arts experiences had been a means of encouragement for disadvantaged youth.

Source of Data and Method of Study:

The survey questionnaires were administered to students and their instructors in the Manpower Development and Training Special Youth programs withing the State of Ohio. The sampling consisted of one hundred ninety-five students and thirteen instructors. The students were divided into Division I and II -- those students who had a meaningful Industrial Arts experience and those who had not.

Findings and Conclusions:

1. Industrial Arts experiences did not help the students in the use of tools and in solving the problems related to their occupational training courses.
2. Industrial arts experiences did aid the students in understanding the world of work and the organization of American industry.
3. There appeared to be confusion on the part of the students in knowing the difference between Vocational Trade and Industrial Education and Industrial Arts Education.
4. Industrial Arts instructors who had taught the students in this sampling were doing very little in giving pre-vocational guidance with reference to occupational qualifications and vocational training opportunities.
5. The majority of students in the sampling were eighteen or nineteen years of age. The largest representation came from a large city school with the next largest grouping from the large county school systems.
6. Half of the sampling were high school graduates who were now seeking a saleable skill.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Envick (Last name), Donald (First name), Dee (Middle name)

Exact Title A COMPARISON OF EQUIPMENT, MATERIALS AND PROCESSES OF THE PLASTICS INDUSTRY WITH THAT OF SELECTED SECONDARY SCHOOLS.

Degree granted D.Ed., Date 1968, No. of pages in report ____

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to identify the processes, materials and equipment used by the plastics industry and to compare these findings with the current and anticipated teaching of plastics in selected secondary schools.

Source of Data and Method of Study:

Industrial and educational specialists from 127 industrial and 79 high schools respectively were surveyed to identify and compare the major components of the plastics industry to those currently being taught in secondary schools. Each of the schools offered at least 9 weeks of plastics and each industry was involved with at least two or more different types of plastic manufacturing processes.

Findings and Conclusions:

The findings suggest that: (1) schools and industries shared different opinions about the processes which should be taught in the industrial arts programs, (2) there was little relationship between the processes taught in secondary schools and the processes actually used by industry especially in the area of using thermosetting plastic materials, and (3) industry effectively utilized more and different types of equipment than is typically available or used in secondary school industrial arts shops. Recommendations were made concerning alternative methods to improve instruction dealing with the plastics industry.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATI
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Falls (Last name), John (First name), E. (Middle name)

Exact Title A COMPARISON OF INTRODUCTORY INDUSTRIAL ARTS WITH METAL AND WOOD MANUFACTURING INDUSTRIES.

Degree granted Ed. D. ,Date 1968 ,No. of pages in report

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine the extent to which the junior high school industrial arts curriculum offers exploratory opportunities for understanding the processes and procedures used in selected manufacturing industries.

Source of Data and Method of Study:

A survey was conducted of (a) the personnel directors of 240 metal and woodworking firms and (b) the industrial arts teachers of 216 junior high school programs. In an attempt to identify the content for beginning exploratory industrial arts courses, the responses of the personnel directors and the industrial arts teachers were compared.

Findings and Conclusions:

The findings revealed that large discrepancies existed between the perceptions of personnel directors and industrial arts teachers in terms of (a) the processes and procedures used by industry and those currently taught in junior high school programs, and (b) the teaching objectives of junior high school programs and requirements of the manufacturing industries. It was concluded that industrial arts teachers most frequently adhere to the philosophy of "developing skills" while industrial requirements call for presenting more related information. In general, while the content of industrial arts courses are consistent with (acceptable to) industrial personnel directors, the instructional emphasis placed on the content is not consistent with the requirements of industry.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Farahbakhshian, Ebrahim, ______
(Last name) (First name) (Middle name)

Exact Title Analytical Study of Cooperative Education in the United States and Development of a Proposed Plan for Iran.

Degree granted Ed. D., Date Summer 1967 No. of pages in report 181

Granted by Colorado State College Greeley, Colorado.
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To find the needs and possibilities for a cooperative education program and to make suggestions for implementation of such a program in Iran.

Source of data and method of study: Data was gathered by (1) obtaining statistical information about Iran from the Ministries of Education and Labor, the Plan Organization, Division of Manpower, regarding the education and needs for manpower; and (2) sending letters to the directors of vocational education in each state of the United States to obtain their plan for cooperative education. By means of an analysis of the material collected, a program was developed which might serve as a guideline for implementing such a project in Iran.

Findings and Conclusions: Requirements of the states were essentially the same, coinciding with the government in order to receive financial assistance. Most states reported programs in operation, others reported programs being established. Students working industry should be more aware of modern industrial methods and skilled in use of machinery than those who do not have this experience. Thus the importance of the "laboratory" of industry, and reduced cost factor to the school is apparent. Conditions in Iran related to lack of technical-vocational schools, and the need for adequately trained employees, employment situation in the agrarian areas, large number of dropouts indicate cooperative education would at least partially solve these pressing problems.

Recommendations are that: (1) Plan of this study be submitted to Ministry of Education for study and implementation. (2) Cooperative education for boys and girls in Iran. (3) Special facilities for coordinators of cooperative education. (4) Advistory committees from various phases of industry maintain a close relationship to school. (5) Materials for vocational and technical education be made available. (6) Publicity be used skillfully for promotion of the program. (7) Curricula be kept up to date by school and industry. (8) All departments of vocational and technical training unite in a central bureau. (9) Occupational guidance and counseling be made available.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Farmer, Joe, Harold
(Last name) (First name) (Middle name)

Exact Title THE TEACHING OF INDUSTRIAL ARTS IN THE SECONDARY SCHOOLS OF TEXAS

Degree granted Ed.D., Date 1950, No. of pages in report 133

Granted by New York Univeristy New York, New York
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate the industrial arts programs carried on in one hundred and fourteen four-year public high schools of Texas during 1948-1949.

Source of Data and Method of Study:

Data obtained from recent bulletins from the State Department of Education, a questionnaire, and visits to 31 schools.

Findings and Conclusions:

The industrial arts program in Texas did not meet the specified aims and objectives to any large degree. Few aids were available from the State Department of Education A majority of the teachers had less than sixty hours of college credit in industrial arts and many failed to meet the state's minimum requirement. The industrial arts standards, regulations and restrictions were not adequate to provide a well-rounded program for the state.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Farr, Wilbur, James
(Last name) (First name) (Middle name)

Exact Title EDUCATIONAL NEEDS OF URBAN RESIDENTS CONCERNING THE USE OF ELECTRICITY IN THE HOME.

Degree granted Ed. D., Date 1958, No. of pages in report 136

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the educational needs of residents in urban communities concerning the use of electricity in the home, in order that school authorities may have evidence upon which to organize electrical instruction in high schools and in adult education programs.

Source of Data and Method of Study:

An interview schedule used in a series of 200 interviews with the male parent of secondary school students.

Findings and Conclusions:

The uses of electricity in the home as follows: heat, rotary power, light, communications, control, chemical effect, and electronics. There are minor repairs and maintenance jobs in the home which do not require the services of a skilled technician. Boys, girls, and adults should be trained to perform unspecialized tasks that contribute to the upkeep of the home. Adults in urban communities generally would like to learn more about the selection, operation, and care of electrical equipment and about planning for the uses of electricity. Instruction should be provided by the public high schools for boys and girls on the fundamentals of electricity, the selection and purchase of electrical equipment, minor repairs, and planning for the use of electricity. This can be a vital portion of the school program, teaching the related theories and principles in terms of the everyday experiences of the student.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Faulds (Last name), Vincent (First name), R. (Middle name)

Exact Title TECHNICAL TRAINING NEEDS OF SELECTED ARKANSAS INDUSTRIES.

Degree granted Ed. D., Date 1956, No. of pages in report 144

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the need for trained technicians in selected Arkansas industries, and whether or not existing educational institutions in the State are meeting the need.

Source of Data and Method of Study:

The 159 employers in 19 selected Arkansas industries who returned usable information forms mailed to them, analyses of U.S. Census reports and literature in the field, and personal interviews with employers and educators in Arkansas.

Findings and Conclusions:

The selected industries are playing an increasingly important role in the economy of Arkansas. Existing educational institutions of the State are not doing an adequate job of technical training to meet the needs of these industries. The need for trained technicians in Arkansas is sufficiently large to justify the establishment of additional technical curriculums in the State. Facilities now exist within the educational institutions of the State which could be utilized in establishing such curriculums.

Existing training facilities and technical employment patterns suggest rather definite geographical locations for technical curriculums in Arkansas.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS

Author Fawcett, Claude, W.

Exact Title ADMINISTRATION OF EDUCATION FOR VOCATIONAL READJUSTMENT.

Degree granted ______ Date 1943 No. of pages in report ______

Granted by Yale University New Haven, Conn.
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Feather (Last name), Don (First name), B. (Middle name)

Exact Title THE RELATION OF PERSONALITY MALADJUSTMENT OF FIVE HUNDRED THREE UNIVERSITY OF MICHIGAN STUDENTS TO THEIR OCCUPATIONAL INTERESTS.

Degree granted Ph. D., Date 1949, No. of pages in report 146

Granted by University of Michigan (Name of institution) Ann Arbor, Michigan (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relationship between measured personality traits to occupational interests.

Source of data and method of study:

Five hundred and three students at Michigan, mostly veterans, who were consecutively counseled at the Bureau of Psychological Services, were administered the Minnesota Multiphasic Personality Inventory and the Kuder Preference Record. For the Multiphasic, a T Score of 70 or more was considered maladjusted; while on the Kuder the 75th percentile was adopted as the level of significance. Finally, a modified Fisher t formula was devised to test the differences between the occupational interests of the normal and maladjusted individuals.

Findings and Conclusions:

The foregoing procedure revealed that the students in question who had personality maladjustments as previously defined were more apt to have occupational interests which fall within the Kuder range of significance in the literary, musical, and artistic areas than those who had normal profiles on the Multiphasic and were less apt than the latter to have interests in the mechanical and scientific areas. The author also indicated that the significance of these findings for counselors, and suggested further research as an outgrowth of this investigation.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Fee (Last name), Edward (First name), Meredith (Middle name)

Exact Title THE ORIGIN AND GROWTH OF VOCATIONAL INDUSTRIAL EDUCATION IN PHILADELPHIA TO 1917.

Degree granted Ph. D., Date 1938, No. of pages in report 258

Granted by University of Pennsylvania (Name of institution) Philadelphia, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An historical description of all forms of industrial education from the beginning of the colonization of Philadelphia to 1917. It is based on material from 122 manuscripts and 131 books and other publications.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Fales (Last name), Roy (First name), G. (Middle name)

Exact Title INDUSTRIAL ARTS IN GENERAL EDUCATION.

Degree granted Ed.D., Date 1948, No. of pages in report 210

Granted by New York University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To bring out for consideration the basic principles of industrial arts education and to survey the present programs in New York State. Good practices are recommended and trends indicated.

Source of Data and Method of Study:

The thesis is the result of: Compilation of experiences (by the author) over 15 years; conferences with school administrators and shop teachers; statistics gathered from several sources such as reports, bulletins, and questionnaires; a group of bulletins originally distributed by the author in 1940 were criticized by instructors, rewritten and reissued in 1944. These bulletins are the basis for this document.

Findings and Conclusions:

The document deals with the history and development, the philosophy and objectives, planning and methods of instruction of industrial arts, and curriculums and their interpretation at various grade levels. Forty-six principles and practices are listed as a summary for the document. Some of them selected at random are as follows: Industrial arts as a school subject was developed in 1909. It has increased in usage since that time. It is not unusual for pupils to find recreation, play and hobby interests in the industrial arts work. The comprehensive general shop (not course) is particularly well adapted for a school employing only one industrial arts instructor. Emphasis can be placed on learning to plan and think through problems by causing pupils to plan, insofar as possible, every article which they construct in the shop. Eleven trends are listed; several being as follows: Industrial arts shops are becoming much larger. A pupil-personnel management plan is usually a part of every shop organization.... A fuller understanding of the pupil-personnel plan is...developing slowly among teachers and teacher-trainers. Organized group instruction has always been a part of all school shop work. It will always be necessary otherwise... the shop experience is nothing but a "trial and error experience." The bibliography consists of 29 pages and includes practically all of the books and articles that have been published and that might be considered contributions to the subject.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Fagan (Last name), Raymond (First name), E. B. (Middle name)

Exact Title COLLEGE PREPARATION FOR TEACHING MANIPULATIVE ACTIVITIES IN THE ELEMENTARY SCHOOL

Degree granted Ed.D., Date 1954, No. of pages in report 124

Granted by Oregon State College (Name of institution) Corvallis, Oregon (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the nature and extent of the preparation in manipulative activities offered by elementary teacher education institutions.

Source of data and method of study:

Data were secured by a questionnaire sent to heads of selected elementary education departments in the United States.

Findings and Conclusions:

Practices concerning time spent, credit, requirements, courses designed for elementary teachers, and textbooks seem to be generally adequate. Possibilities of relationships made with elementary school subjects and the variety of experience areas used in courses seem to be entirely inadequate. The majority of courses are divided about equally between education and art departments. Industiral arts and home economics departments are responsible for relatively few courses. Two courses are recommended; one for familiarization with tools and materials and the other for methods of use.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Feirer, John, Louis
(Last name) (First name) (Middle name)

Exact Title RESEARCH LEADING TO ADVANCED DEGREES IN INDUSTRIAL ARTS IN THIRTY-THREE COLLEGES AND UNIVERSITIES.

Degree granted Ed.D., Date 1946, No. of pages in report 295

Granted by University of Oklahoma Norman, Oklahoma
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An investigation of the status of research in graduate programs in industrial arts education in thirty-three colleges and universities for the year 1946. A practical graduate course of study for research is organized.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ferns (Last name), George (First name), William (Middle name)

Exact Title PRINCIPLES FOR DESIGNING AND CONDUCTING LEARNING EXPERIENCES FOR IMPROVING PROBLEM - SOLVING ABILITIES AS APPLIED TO INDUSTRIAL ARTS TEACHING.

Degree granted Ph. D. ,Date 1962 ,No. of pages in report ____

Granted by Michigan State University (Name of Institution) East Lansing, Michigan (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I. C. ( )

Purpose of Study:

To develop principles for guiding industrial arts teachers when designing and conducting learning experiences for improving student problem-solving abilities.

Source of Data and Method of Study:

The principles were developed as the result of careful examination of (1) writings of selected authorities in education who have dealt with problem solving as an objective and method of education, (2) the writings of educational philosophers John Dewey and William Kilpatrick, and (3) experimental research studies in problem solving. This study is best classified as philosophical. It may also be identified as synthetic research since its purpose was to focus on a central problem the concepts and findings originating in a number of studies.

Findings and Conclusions:

1. The greatest gains in improving student problem-solving abilities can be affected when the teacher consciously plans learning experiences with the goal of improving problem-solving ability in mind.
2. The improvement of student problem-solving abilities is best accomplished by the teacher's regulating indirectly the conditions which guide it.
3. The exposure of students to direct experience in attempting to solve real-life problems through the use of problem-solving method is the teacher's most appropriate way to achieve improvement in problem-solving abilities.
4. In designing and selecting problem situations suitable for improving student problem-solving abilities, it is important that the teacher make the distinction between genuine problems and those which are not.
5. It should be recongized that problem solving is both a method and an objective in education.
6. Problem-solving method is practically synonymous with learning; and there are indications that problem solving is generally equal or superior to other methods of learning.
7. Learning experiences, to be educative, should provide for further growth, for interaction between individual and environment, and for intelligent managing of ends and means.

246

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Fike (Last name), Iris (First name), Linn (Middle name)

Exact Title HISTORICAL DEVELOPMENT OF VOCATIONAL INDUSTRIAL EDUCATION PROGRAMS OF SECONDARY GRADE LEVEL IN PUBLIC SCHOOLS OF PENNSYLVANIA FROM 1900 to 1954.

Degree granted Ph. D., Date 1956, No. of pages in report 245

Granted by University of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To trace the development of vocational industrial education of secondary grade level in Pennsylvania.

Source of Data and Method of Study:

Federal and State laws; legal opinions and decisions related to vocational industrial education; statistical, annual, and biennial reports of the Superintendent of Public Instruction in Pennsylvania; and the Pennsylvania School Journal.

Findings and Conclusions:

Vocational trade and industrial education classes and schools developed slowly in the decade following the passage of the first vocational education acts. Early emphasis in Pennsylvania was placed upon classes related to the mineral industries. However, training in the three general trade areas of machine shop, electrical shop, and auto mechanics became the most popular in terms of pupil enrollment, district participation, teacher employment, and money expenditure. Legislation has been modified as experience has shown need.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Finkelstein (Last name), Abraham (First name), M. (Middle name)

Exact Title A MANUAL OF FUNCTIONAL LESSON PRESENTATIONS FOR TEACHERS OF INDUSTRIAL ARTS, WITH EMPHASIS ON PUPIL UNDERSTANDING

Degree granted Ed. D., Date 1959, No. of pages in report ___

Granted by New York University (Name of Institution) New York City, New York (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a manual of lesson presentations in the field of industrial arts to enhance student understanding.

Source of Data and Method of Study:

Lessons were selected on the basis of ratings assigned to each from a group of 179 industrial arts teachers. They were later translated into "valid lesson content" by selected industrial arts teachers and/or teacher educators and field tested by fifteen teachers in three different schools.

Findings and Conclusions:

While the teachers experienced difficulty in teaching and holding the attention of students with lessons consisting of complex relationships (i.e. design, planning, measurement, etc.), the manual was considered to be functional and operationally valid.

248

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Fisher (Last name), Richard (First name), E. (Middle name)

Exact Title STATUS OF AND NEED FOR TERMINAL VOCATIONAL-TECHNICAL CURRICULA IN SENIOR COLLEGES AND UNIVERSITIES.

Degree granted Ed. D., Date 1956, No. of pages in report 151

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the status of and need for terminal vocational-technical curriculums in senior colleges and universities, and what factors contribute most to the development and popularity of such curriculums.

Source of Data and Method of Study:

Information forms containing data pertinent to the study were received from 78 colleges and universities in 39 states. Literature in the field of junior and senior college organization and administration, including college bulletins and catalogs, was reviewed for information and data.

Findings and Conclusions:

The subject fields most commonly served by terminal curriculums in senior colleges and universities are secretarial science and industrial education. Entrance requirements are similar in both terminal and degree curriculums. Accreditation of curriculums, transfer of credit, and general education present important issues. The attitude of faculty members and administrators at senior colleges toward terminal curriculums appears to be a more serious deterrent to their development and success than is the opinion and attitude of students. In view of the high mortality rate from degree curriculums, the critical shortages of skilled and technically trained manpower and the impending wave of students seeking entrance to college, it appears that senior colleges and universities, along with junior colleges and technical institutes, should make more provision for terminal curriculums.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Flaherty, , Hugh ,
(Last name) (First name) (Middle name)

Exact Title TRAINING WAR WORKERS FOR THE AIRCRAFT INDUSTRY.

Degree granted Ed.D. , Date 1944 , No. of pages in report

Granted by New York Univeristy, School of Education New York, New York
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of a traditional vocational department of a high school and the influence of a war training program on the curriculum. It considers the aims and objectives of vocational education.

Source of Data and Method of Study:

Findings and Conclusions:

250

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Fleming,	Joseph,	Willerton
(Last name)	(First name)	(Middle name)

Exact Title PREDICTING TRADE SCHOOL SUCCESS.

Degree granted Ed.D., Date 1937, No. of pages in report 228

Granted by University of Pittsburgh	Pittsburgh, Pennsylvania
(Name of institution)	(City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of school and placement records of boys formerly enrolled in the C.B. Connelley Trade School, Pittsburgh, Pennsylvania, to determine what factors have prognostic value for selecting applicants to this school.

Source of Data and Method of Study:

Finding and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Foltman, (Last name), Felician (First name), F. (Middle name)

Exact Title FACTORS BEARING ON SUPERVISORY MORALE--AN ANALYSIS OF A TRAINING PROGRAM, THE PHILOSOPHY OF MANAGEMENT, AND CERTAIN PERSONNEL PRACTICES.

Degree granted Ph.D., Date 1950, No. of pages in report 375

Granted by Cornell University (Name of institution) Ithaca, New York (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the place and function of an industrial training program with respect to the morale of supervisors, and to determine whether the morale of supervisors can be used as one indication of the effectiveness of a supervisory training program.

Source of Data and Method of Study:

A case study with a combination of personal observations and examination of certain types of objective data. Interviews with staff members of the personnel department, and foremen.

Findings and Conclusions:

Some of the conclusions were: One of the major areas for further training was found to exist in the first factor of morale-- the purpose of the organization; many of the larger problems which directly affect morale of supervisors cannot be attacked through training except as a supplementary device to other management action; there is a recurring need to explain the function of supervisors who are between the foremen and their president; the interpretative function of training has direct effect on the morale of supervisors; an initial participation in the formulation of new policy by foremen can be obtained through the training department; and the training meetings are conducive to higher morale.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT SESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Forkner (Last name), Hamden (First name), Landon (Middle name)

Exact Title EQUALIZATION OF FEDERAL AID FOR VOCATIONAL EDUCATION

Degree granted Ph.D., Date 1939 No. of pages in report 132

Granted by University of California, Berkeley (Name of institution) Berkley, California (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An analysis of the basis for allocation of Federal aid for vocational education with recommendations for improvement.

Source of data and method of study:

Findings nd Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Forkner, William, R.
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL ARTS DESIGN, A MEASURE OF A CRITERION OF DESIGN VERSUS CONTENT OF INSTRUCTION IN SECONDARY SCHOOLS OF COLORADO.

Degree gramted Ed.D., Date 1968, No. of pages in report 198

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To develop a criterion as identified in publications in the field of industrial arts design and to compare that criterion to the content of instruction in the public secondary schools of Colorado.

Source of Data and Method of Study:

The criteria were presented to seven industrial arts design specialists for an evaluation. Upon return, the classifications of the specialists were compiled into a measuring instrument which was applied to responses by secondary school industrial arts teachers in the state of Colorado.

Data for the study were obtained by questionnaire survey. An information form was mailed to 120 teachers of industrial arts who were members of the Colorado Industrial Arts Association. The response to the information form was a 92 per cent.

Findings and Conclusions:

As for making the best use of time in design instruction, as revealed in the questionnaire answers it was learned that concerted efforts to include the subject, either in conjunction with other areas or in detailed application to the media of the laboratory is more suitable for the learning experiences of students. Teachers could well afford to approach design as a part of instruction rather than as incidental to their area of industrial arts.

Based on the findings of the study, teacher preparation agencies should make an effort to organize the content and instructional techniques for college students who are planning to teach industrial arts because of the tendency for "teachers teaching as they were taught."

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Foss (Last name), Maurice (First name), Felker (Middle name)

Exact Title IMPLICATIONS FOR INDUSTRIAL ARTS TEACHER EDUCATION FROM CASE STUDIES OF SELECTED TEACHERS.

Degree granted Ed. D., Date 1958, No. of pages in report 484

Granted by University of Cincinnati (Name of institution) Cincinnati, Ohio (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine the personal, social, experiential, situational, and educational factors involved in the adjustment to teaching of a selected group of graduates of the Industrial Arts Department of Miami University, Oxford, Ohio.

Source of Data and Method of Study:

The data examined included entrance tests, high school transcript, application for admission, college grade record, placement bureau data, and health service record. Each teacher was observed during a half day of teaching, and interviews were held with the teacher and his superintendent or principal.

Findings and Conclusions:

Personal goals and attitudes are the most important elements in teaching success. Superior teachers came to college to prepare to teach; they chose their college program because of its reputation in its field. They were regarded as being "conscientious," "getting along with others," and "liking children." They expressed an interest in "working with children," "the subject matter of industrial arts," and "a belief in the school as an instrument of society." They were chosen by administrators of superior schools who believed in the subject matter. Children in their classes were effectively busy and interested in their work.

Less satisfactory teachers showed higher A.C.E. scores but lower achievement test scores and college grade records. They lacked the interest and work habits of the superior teachers; their classes showed less interest, accomplished less, and had poor personal relations. School administrators, as a group, possessed a narrow concept of the function of the industrial arts program.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Fowler, Ewell, Weldon
(Last name) (First name) (Middle name)

Exact Title OPERATION SHEETS VERSUS PROCESS MODELS IN SHOP TEACHING: AN EXPERIMENTAL COMPARISON.

Degree granted Ed. D., Date 1949, No. of pages in report 229

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relative effectiveness of operation sheets and process models when used for reference purposes in shop teaching.

Source of data and method of study:

Two sets of job assignments for bench woodwork were prepared which were identical except that one set was keyed to operation sheets and the other set was keyed to three-dimensional process models for reference purposes. The job assignments were tried out experimentally in typical college teaching situations with statistically equated student groups.

Findings and Conclusions:

On the basis of the predicted and actual scores made by the students, and other factors considered the following conclusions were reached: The operation sheets were superior to the process models in teaching informational content; the operation sheets were slightly superior to the process models in regard to quality of work; from the standpoint of time required for project construction, the operation sheets and process models were about equally effective; the operation sheets were superior to the process models in regard to acquiring skill in laboratory work; the operation sheets and process models were about equally effective from the standpoint of errors made in project construction; the operation sheets and process models were about equally effective in regard to economy of materials used in project construction; and in regard to effort required on the part of the instructor, the operation sheets were definitely superior to the process models as used in this study.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Fowler (Last name), Richard (First name), J. (Middle name)

Exact Title AN EXPERIMENTAL COMPARISON OF TWO LABORATORY METHODS FOR TEACHING COLLEGE-LEVEL INTRODUCTORY ELECTRICITY IN INDUSTRIAL EDUCATION.

Degree granted Ed. D. ,Date 1965 ,No. of pages in report

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To compare the relative effectiveness of two laboratory, project methods of instruction for teaching college-level electricity.

Source of Data and Method of Study:

Fifty-six college students enrolled in basic electricity were randomly assigned to two treatments. .The effectiveness of the two methods of evaluationwas determined experimentally as measured by the students' ability to (a) understand concepts (b) apply principles to practical problems and (c) develop a favorable attitude toward the course.

Findings and Conclusions:

Although "quick-connect" activities tended to be more effective than the "project method", the differences for each of the three criteria were not significant. It was, therfore, concluded that a number of laboratory activities may be equally effective methods of instruction and the decision to select one over another may be determined on the basis of other criteria (cost or time devoted to instruction).

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Francis (Last name), George (First name), Harold (Middle name)

Exact Title AN EXPERIMENTAL STUDY OF THE EFFECTIVENESS OF SELF-INSTRUCTION VERSUS THE LECTURE-DEMONSTRATION METHOD OF TEACHING SELECTED PHASES OF ELECTRICITY

Degree granted Ph. D. Date 1966 No. of Pages in Report 143

Granted by Southern Illinois University (Name of Institution) Carbondale, Illinois (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This study was concerned with the testing of two hypotheses relating to the comparative effectiveness of two teaching methods.

Source of Data and Method of Study:

The data gathered was used to determine whether or not students taught the electrical unit Ohm's Las and Power in D.C. Circuits by the programmed method achieved higher scores on a criterion test when compared with those taught the same unit by lecture-demonstration. Data were obtained on 60 college students enrolled at Millersville State College, Millerville, Pennsylvania during two semesters in 1964-65 and 1965-66.

Findings and Conclusions:

1. There were no statistically significant differences between methods when group means on the criterion measure for initial achievement and retention were compared. The correlation between cited criterion test scores and CEEB verbal and mathematics scores was insignificant.
2. In terms of student achievement, the programmed method can be as profitable as lecture-demonstration when the Programmed Unit Text is used.
3. Additional unit texts should be developed in the areas of instruction in a first-year Industrial Arts college electricity course.
4. The use of programmed material such as the unit text would release teacher time normally spent in preparation and presentation.
5. An evaluation needs to be made of the influence of the teacher on student achievement when programmed material is used in the instructional program. A study of the role of the teacher in a programmed situation might be considered.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Franklin, Marion, Edmund
(Last name) (First name) (Middle name)

Exact Title A HISTORY OF INDUSTRIAL EDUCATION UP TO 1950

Degree granted Ed. D., Date 1952, No. of pages in report 372

Granted by University of Oklahoma Norman, Oklahoma
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To record the history of industrial education in Oklahoma.

Source of data and method of study:

Data were obtained from a historical survey of records and publications, contact with individuals having a major role in the development of the Industrial Education program in Oklahoma through personal letters and visitations, and the author's experience in the field.

Findings and Conclusions:

Little was accomplished in an organized program of industrial education until after the first decade of the twentieth century. During the next ten year period there was a rapid expansion of the manual training program in the high schools of the State. The introduction of vocational-industrial education at this time resulted in a period of approximately ten years of confused issues. Since that time there has been a rapid growth of these two parallel but differentialed programs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Frankson, Carl, Edward
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL ARTS TEACHER EDUCATION IN MAINE

Degree granted Ph.D., Date 1948, No. of pages in report 288

Granted by Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To study the program of industrial arts teacher education in Maine with a view toward extending and reorganizing the program at the Teachers College to meet the . needs of the youth of Maine.

Source of data and method of study:

Visits were made to many schools to gain first hand information concerning what was being taught in industrial arts. The space and facilities available, the methods used, and other information of a general nature concerning industrial arts were secured through conference with instructors and administrators.

Findings and Conclusions:

The direction of education lies within ideas of American culture. The need for industrial arts, or rather "manual training" was recognized by legislation in 1911. The 6 shop areas of the college program, namely: wood, metal, graphic arts, auto mechanics, electricity and drawing were found to be below standard in health aspects, sanitation, storage space, library facilities, location and records. The students at Gorham, Maine are selected on only one basis, academic achievement. Music, fine arts and literature are not included in the cultural experiences of industrial arts majors at Gorham. There is no organized program of counseling and guidance available to the students at Corham. Student teaching facilities are selected by the State department. The improvement training of teachers in Maine is limited to summer school every other year. The study of the industries and occupations of Maine reveals the State to be predominantly agricultural in character, but industrial in nature. Arts and crafts have been practiced by the people of maine since colonial times and comprise a major industry. The schools of Maine in which industrial arts are taught are predominantly small, 55 per cent having an enrollment of 350 or less.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Frederick (Last name), Lawrence (First name), Mont. (Middle name)

Exact Title ORIGIN AND DEVELOPMENT OF INDUSTRIAL EDUCATION IN NEW MEXICO.

Degree granted Ed. D., Date 1955, No. of pages in report 267

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To reveal the origin and trace the development of industrial education in New Mexico and to indicate the large amount of attention given to the several forms of industrial education in a state that is commonly considered to be agrarian in character.

Source of data and method of study:

Data were obtained from published and unpublished reports of educational agencies of the New Mexico state government; books and theses compiled on New Mexican history; professional magazines published in New Mexico; bulletins and catalogs of various New Mexico educational instututions; 14 personal interviews; 93 letters from Chamber of Commerce and county and city school superintendents; and from 100 information forms from individual schools and industrial corporations.

Findings and Conclusions:

It would appear that industrial education has played an extensive role in the over-all educational development of New Mexico. However, the quality of the total program probably would have been improved had there existed statewide supervision of both industrial arts and vocational-industrial education.. The obstacle of financial inadequacy apparently has been a key factor in the development of industrial education in New Mexico.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Frisby, Russell, Charles
(Last name) (First name) (Middle name)

Exact Title A Survey of Selected Metropolitan Milwaukee Industries To Determine Vocational Qualifications Desired in High School Graduates.

Degree granted Ed. D., Date Aug. 15, 1968 No. of pages in report 156

Granted by Colorado State College Greeley, Colorado.
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To obtain information relative to the hiring practices of employers in industrial type entry occupations in selected industries and ascertain how these practices relate to education.

Source of data and method of study: Data was gathered by use of the interview questionaire. The survey included forty-eight industries in sixteen major manufacturing industrial groups in the Metropolitan Milwaukee area.

Findings and Conclusions: Adequate preparation of high school students for industrial type jobs is lacking. Programs, closely related to industrial jobs that are basic, broad, and exploratory in nature are needed.

The development or expansion of a thirteenth and fourteenth year of terminal industrial education should be considered.

Increased counseling services are needed to provide realistic information concerning industry, such as job opportunities, job requirements, working conditions, and training.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Fritz (Last name), Robert (First name), Charles (Middle name)

Exact Title CERAMIC TECHNOLOGY: A TECHNOLOGICAL RESEARCH AND CURRICULUM ANALYSIS, WITH IMPLICATIONS FOR INDUSTRIAL EDUCATION.

Degree granted Ph. D. Date 1960 No. of pages in report 319

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The development of a curriculum analysis based on certain well defined postulates within the area of industrial education. The postulates are definable trends in the contemporary society of the United States. The study is limited to industrial educational theories for curriculum divelopment.

Source of Data and Method of Study:

The data presented in the technological research was selected from bibliographical references: technical, literary, and scientific books and periodicals and scientific writings. The statements expressed or implied were extracted from the literature and condensed so as to be applicable to the scope and limitations of the study. The technical information was written as an overview of selected areas of ceramics with quotations interpolated to substantiate or express the scientific and educational factors.

Findings and Conclusions:

The conclusions are based on the postulate that the contemporary society in the United States has developed into one that is basically technological, and that educational institutions should reflect this technology through the objectives of the various programs.

1. There is need for further study and continual defining of the objectives and relationship between the areas within industrial education.
2. The analysis of ceramic technology illustrates the numerous scientific disciplines applicable to inorganic materials that may be used in industrial education.
3. The subject matter outline derived from the technological research illustrates that the curricular elements are diversified and numerous, with a wealth of materials for potential units of instruction.
4. The curricular elements in the unit of instruction are delimited by the philosophical objectives representative of the various educational levels, but the inclusion of research and experimentation extends the unit problem beyond the usual project approach of curriculum organization.

SOUREE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Fryklund, (Last name), Verne (First name), C. (Middle name)

Exact Title THE SELECTION AND TRAINING OF MODERN FACTORY WORKERS.

Degree granted Ph.D., Date 1933, No. of pages in report 384

Granted by University of Minnesota (Name of institution) Minneapolis, Minnesota (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

An investigation, emanating from the Minnesota Employment Stabilization Research Institute, which provides data on the use of aptitude tests in the selection of factory workers. Recommendations for industrial training programs are included.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Furia, (Last name), John (First name), J. (Middle name)

Exact Title THE PLANT SCHOOL AS A FORM OF VOCATIONAL EDUCATION.

Degree granted Doctors, Date 1930, No. of pages in report ______

Granted by Teachers College, Columbia University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Furlong (Last name), John (First name), (Middle name)

Exact Title CASE STUDIES OF BEGINNING TRADE AND INDUSTRIAL INSTRUCTORS IN A VOCATIONAL EVENING SCHOOL.

Degree granted Ph. D., Date 1957, No. of pages in report 413

Granted by University of Minnesota (Name of institution) Minneapolis, Minnesota (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To discover, through the use of a concentrated case-study technique, the problems and accomplishments of beginning instructors teaching trade and industrial evening classes in a large metropolitan vocational school.

Source of Data and Method of Study:

Pertinent literature, interviews with teachers, classroom observations, and student ratings of their instructors.

Findings and Conclusions:

Generalizations based on the individual cases: the lack of an effective planned system of instruction adversely effected the quality of teaching done by the instructors; there was little teacher-planned motivation to develop the students' interest in what was to be learned; personal relationships between supervisory personnel and teachers were excellent; the instructors desired a record and evaluation of their progress and achievement; they were continually faced with the problem of tardiness; they had no uniform preservice teacher training; insufficient attention was paid to the work needs of the students; there was wide range in the classroom opportunities for students to use what they learned in class; the instructors were highly competent in their knowledge of the field they were teaching, and most students believed they received worthwhile instruction.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Fuzak, (Last Name), John (First Name), Alexander (Middle Name)

Exact Title EVALUATION OF COOPERATIVE ATTITUDES IN INDUSTRIAL ARTS CLASSES

Degree Granted Ed.D., Date 1948, No. of pages in report 115

Granted by University of Illinois (Name of institution) Urbana, Illinois (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

An experimental study to develop a test for measuring the results of efforts to develop cooperativeness in industrial arts classes.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF, STUDIES IN INDUSTRIAL EDUCATION
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Gadbois, Robert, Leon
(Last name) (First name) (Middle name)

Exact Title A Study of the Relative Holding Power of the Academic, the Industrial Arts, and the Vocational Curricula of the High Schools of Colorado Springs, Colorado; Compared on the Basis of the Magnitude of Student Scores of Probability Towards Dropping Out.

Degree granted Ed. D., Date Winter 1968 No. of pages in report 73

Granted by Colorado State College Greeley, Colorado
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To measure the holding power of the academic or college preparatory curriculum, the industrial arts curriculum, and vocational curriculum in the district under study and thus assess the appropriateness of the various curricula for students with various degrees of potential to drop out.

Source of data and method of study: Fifty male students of the Colorado Spring Public Schools from each of three curriculums: (1) academic, (2) industrial arts, and (3) vocational education, matched or paired according to the total profile of their dropout potential. The students progress will be followed until they should have graduated.

Findings and Conclusions: The most significant finding of the study was that the matching process identified twenty-four dropouts of which eleven were included in the academic curriculum area, seven were in the industrial arts area and six in the vocational area. It was concluded that the vocational and industrial arts curricula had greater holding power than the academic curriculum. Because of the relatively small measured difference in effectiveness between the industrial arts and the vocational curricula areas, no distinction, in terms of the relative merits of each, was made.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Gailey (Last name), David (First name), S. (Middle name)

Exact Title A STUDY TO DETERMINE AND COMPARE WORK ASSIGNMENTS OF TECHNOLOGISTS IN SELECTED INDUSTRIAL ORIENTED TECHNOLOGIES.

Degree granted ____ Date May, 1969 No. of Pages in report ____

Granted by Texas A&M University (Name of institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine what relationship exists among work assignments of selected industrially oriented technologists who possess the baccalaureate degree by:

1. Determining the types of work in which technologists in selected technologies are engaged.
2. Comparing these types of work to determine if they are peculiar to a particular technology or if they are common to others.

Source of Data and Method of Study:

Lists of colleges that offered technology degrees were obtained. The school catalogs were analyzed to determine relevancy to the study, and program administrators were requested to furnish names and addresses of technology graduates since 1960. Industrial employers and technologists were contacted to help determine a cross section of areas and phases of work technologists were involved in.

Findings and Conclusions:

1. There were contrasting differences among work assignments in only two of seventeen work areas: design and research and development.
2. Technologists were engaged in the areas of design, methods analysis, and supervision more predominantly than in other areas.
3. There was a strong trend for technologists to become supervisors as time of employment increased.
4. Industry has not accepted the title "Technology." Only one per cent of all technologists had that title.

b

26A

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Gaines (Last name), Thomas (First name), R. (Middle name)

Exact Title RELATION OF WORK EXPERIENCE IN INDUSTRY TO INDUSTRIAL ARTS TEACHING PRACTICES AND SUCCESS.

Degree granted Ed.D., Date 1955, No. of pages in report 166

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relationship of work experience in industry to teaching practices and rated teaching success of industrial arts teachers.

Source of Data and Method of Study:

Through information forms data were obtained concerning work experience in industry and certain teaching practices followed by industrial arts teachers. Evaluation was made of these practices by 50 industrial arts teacher education specialists. Ratings of teaching success were obtained from 88 local industrial arts supervisors on a scale constructed for this purpose. Fifty-one non-work and 98 work experience teachers were compared: (1) with each other on teaching practice followed, (2) with specialists recommendations on the use of these practices, and (3) with each other on supervisory ratings of teaching success.

Findings and Conclusions:

One significant difference was found between non-work and work experience teachers on teaching practices followed regarding industrial arts shop safety, and care and maintenance of equipment. Both groups tended to differ to about the same degree in the extent of use of practices from that recommended by specialists. Non-work and work-experience teachers did not differ significantly on any of the eighteen items rated by the supervisors on teaching success. There seems to be little or no relationship between whether or not industrial arts teachers have work experience in industry and teaching practices followed regarding: conservation of students' time in school shop work, project cost and elimination of waste, selection of course content, teaching methods, techniques, shop housekeeping, and shop management. There seems to be little or no relationship between whether or not industrial arts teachers have work experience in industry and the teaching success ratings given by industrial arts supervisors.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Gallington (Last name), Ralph (First name), C. (Middle name)

Exact Title TEACHER EDUCATION IN INDUSTRIAL ARTS WITH SPECIAL EMPHASIS ON EVALUATIVE CRITERIA.

Degree granted Ed.D., Date 1947, No. of pages in report 199

Granted by George Washington University (Name of institution) Washington, D.C. (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The appraisal of objectives, professional education, organization, and methodology of programs of teacher education by fifty-two specialists and a check-list study of twenty outstanding teacher education programs.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Garbee (Last name), Eugene (First name), Emmett (Middle name)

Exact Title A GUIDE FOR CONDUCTING CRAFTS IN CAMPS.

Degree granted Ed. D., Date 1949, No. of pages in report 256

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a guide or handbook for the conduct of craft programs in camps. To help the craft counselor better understand the approach and development of the creative technique in crafts.

Source of data and method of study:

A large part of the investigation is based on the questionnaire technique which was used to find out what was done in craft programs during the 1948 season in 302 camps. The camps were selected from 17 Eastern States through random sampling. A jury of experts were used to help construct the questionnaire and to criticize findings. A survey was made of available camp craft literature to determine objectives and a philosophy.

Findings and Conclusions:

Camp leaders are generally interested in including crafts in the camp program and make an effort to employ trained personnel. Trained craft counselors are difficult to find for camp employment. Camp administrators are not in agreement as to the best procedures for conducting crafts in camps. Campers should be given opportunities to aid in the selection of the craft projects to be made and the scheduling prescribed. The use of the junior counselor-in-training plan is advocated. The data in the study indicated that power tools are not advisable for camps. Much of the data pointed to the desirability of hand tools in the camp program because of the many skills which the camper could experience through their use. The materials most frequently provided in camps are wood, leather, and metal, and these materials are the ones that campers prefer most in crafts. The lists of basic skills may furnish the crafts counselor and the camp leader a ready reference for planning the craft program in camp. The basic skills were identified and ranked in a sequential order of difficulty with 20 skills included for woodcraft, 38 skills for leather craft, 23 skills for art metal craft, and 23 skills for clay craft. Through the proper selection of craft projects in an area of materials, a camper may be expected to gain a number of experiences in the use of each of the skills identified in that area.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Gavin (Last name), Gordon (First name), O. (Middle name)

Exact Title CHARACTERISTICS OF MASTER'S DEGREE PROGRAMS FOR TEACHERS OF INDUSTRIAL ARTS.

Degree granted Ed. D. Date 1968 Number of Pages in Report 243

Granted by The University of Nebraska (Name of Institution) Lincoln, Nebraska (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This investigation was conducted in order to ascertain what selected individuals considered to be desirable characteristics of master's degree programs for teachers of industrial arts.

Source of Data and Method of Study:

Literature was reviewed, and an opinionnaire was developed and mailed to four selecte populations: 1. Department of I.A. chairmen, 2. Deans of colleges and universities, 3. supervisors of secondary school industrial arts, and 4. teachers of I.A. A total of 402 or 61.39% of the instruments were returned.

Findings and Conclusions:

1. The major emphasis of the master's degree program should be on the development of teaching proficiency in the area of industrial arts education, and in professional education.
2. Industrial arts study should include both industrial arts professional education and technical skill courses.
3. Graduate students should have some experience in research, but not necessarily be required to complete a thesis.
4. Teaching experience prior to completing the master's degree is a valuable asset.
5. The inclusion of crafts as a technical skill area is questionable.
6. A specific number of semester hours credit is the most feasible practice for determining proficiency in a technical skill area prior to entering the master's program.
7. If the student lacks experience in an industrial arts area prior to entering the graduate program, undergraduate courses should be taken for no credit.
8. At least one-half of the program should be of courses open only to graduate students.
9. A minimum of 3.0 (B) average for all graduate work and the completion of the comprehensive examination are desirable graduation requirements.
10. Program requirements should be flexible in order to meet the needs of the graduate student.
11. At least one-half of the program should be allocated to the study of industrial arts professional and technical skill courses.
12. The master's degree program should provide a maximum of opportunities to study and develop new teaching methods and materials.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Gelinas, Paul, Joseph
(Last name) (First name) (Middle name)

Exact Title A VOCATIONAL GUIDANCE PROGRAM FOR SUPERVISORY DISTRICT NUMBER 2, SUFFOLK COUNTY, NEW YORK.

Degree granted Ed. D., Date 1954, No. of pages in report 170

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To find desirable vocational guidance policies and practices which may operate in a cooperative program. To recommend procedures by which such a program may be established in some small schools in the State of New York.

Source of data and method of study:

Data were secured by a survey of all cooperative vocational guidance programs in New York State and their evaluation on a five point scale by directors of guidance and school administrators. Criteria of a vocational guidance program were developed.

Findings and Conclusions:

Small schools are in a position to introduce, through the help of citizen's committees, a vocational guidance program suited to and desirable for small communities at a reasonable cost to the tax-payers. Such a program was developed as part of this study.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Gerber, Russell, L.
(Last name) (First name) (Middle name)

Exact Title MATERIALS AND PROCESSES OF THE FURNITURE MANUFACTURING INDUSTRY WITH IMPLICATION FOR WOODWORKING COURSES IN TEACHER-EDUCATION INSTITUTIONS.

Degree granted Ed.D., Date 1966, No. of pages in report 264

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain what materials and processes are currently being utilized in the wood furniture manufacturing industry and compare these with those which are included in teacher-education woodworking courses in order to more nearly align these college courses with current industrial practices.

Source of Data and Method of Study:

Following an analysis of literature in the field of woodworking and wood furniture manufacturing, an interview schedule and an information form were developed. Eight wood furniture manufacturing companies were studied and 133 woodworking instructors were polled to determine processes and materials utilized in the construction of wooden furniture.

Findings and Conclusions:

1. In the majority of cases the instructional practices used in producing furniture in college woodworking courses were the same as the practices used in the wood furniture manufacturing industry.

2. The greater variances between the two groups was found in the use of finishing materials, methods of application, and methods of drying.

3. More special types of finishes were used by the furniture companies than were used by the college woodworking courses.

4. Some industrial processes were being covered in the school shops as related informational content even though these might not be feasibly undertaken in producing items of furniture.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Gerbracht, Carlton, John
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL ARTS TEACHER SUPPLY AND DEMAND IN THE UNITED STATES.

Degree granted Ph. D., Date 1949, No. of pages in report 201

Granted by The Ohio State University Columbus, Ohio
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To gather, compare, and analyze data which bear on the demand for and the supply of industrial arts teachers, with a view toward making recommendations in teacher-education planning and reporting status and trends in the field.

Source of Data and Method of Study:

The data were gathered by two sets of inquiries. One inquiry was sent to the forty-eight state departments. The other to industrial arts teacher-education centers as listed in the 1948 Industrial Arts Teacher Education Directory.

Findings and Conclusions:

It was concluded that there would not be a serious over-supply of industrial arts teachers nationally through 1952. Neither will there be a serious undersupply of teachers through 1952, but on the basis of data available there will be a serious oversupply beginning with the 1953 graduating class.

276

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Giachino, Joseph, W.
(Last name) (First name) (Middle name)

Exact Title AN ANALYSIS OF THE SUCCESS QUALITIES THAT SHOULD BE EMPHASIZED IN THE TRAINING OF CANDIDATES TO BECOME COMPETENT TEACHERS OF INDUSTRIAL ARTS.

Degree granted Ed.D., Date 1949, No. of pages in report 205

Granted by The Pennsylvania State College State College, Pennsylvania
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To identify the essential qualities which teachers of industrial arts need for success in teaching and determine whether any relationship exists between the educative experiences provided by institutions of teacher education for preparing teachers of industrial arts and the qualities considered by supervisors of industrial arts as contributing to success in teaching industrial arts.

Source of data and method of study:

A questionnaire was mailed to 500 supervisors of industrial arts located in communities having a population of 15,000 or more in each of the 48 states. The questionnaire included a list of success factors which respondents were requested to indicated their opinions as to whether or not the items were very important or not very important for teachers of industrial arts. A second questionnaire was mailed to 225 teacher education institutions. The second questionnaire requested data to indicate the degree of emphasis assigned to each of the success factors in the undergraduate training of industrial arts teachers.

Findings and Conclusions:

Supervisors of industrial arts and teacher educators are not in agreement as to what contributes to success in teaching industrial arts. A need exists for a closer bond of understanding between teacher educators and supervisors if there is to be better trained teachers of industrial arts. A need also exists for accreditation of industrial arts teacher education.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Gilbert (Last name), Harold (First name), G. (Middle name)

Exact Title AN INDUSTRIAL ARTS TEACHER EDUCATION PROGRAM FOR ELEMENTARY SCHOOLS.

Degree granted Ph. D., Date 1955, No. of pages in report 234

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain (1) the need for elementary classroom teachers with industrial arts training and the responsibility of industrial arts consultants, (2) the teacher-education experiences that might best qualify industrial arts specialists for elementary school training, and (3) the teacher-education experiences that might best qualify elementary teachers to use industrial arts experiences.

Source of Data and Method of Study:

(1) A questionnaire to administrators and (2) teacher placement records, to ascertain the need for specialist and consultants in industrial arts on the elementary level. An analysis was made of the work of industrial arts specialists in 16 schools in New York and experiences for preparing such specialists were recommended.

Findings and Conclusions:

The basic industrial arts program to prepare a consultant should include the scientific study of children as well as the organization of elementary schools and methods of initiating and enriching classroom activities. Work in manufacturing, construction, power, transportation, communication, and management as well as development of physical settings. Full-time student teaching under a consultant.

Problems to be included in the elementary education program to prepare industrial arts specialists include the above plus the definition of industrial arts.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Gilliland, Sr. (Last name), Lonnie (First name), (Middle name)

Exact Title PRACTICES IN SAFETY EDUCATION IN THE PUBLIC SCHOOLS OF SELECTED CITIES IN THE UNITED STATES.

Degree granted Ed. D., Date 1955, No. of pages in report 212

Granted by University of Oklahoma (Name of institution) Norman, Oklahoma (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the present practices employed in conducting safety programs in the public schools of selected cities.

Source of data and method of study:

Data were secured from chief of police in each city, superintendent of schools in each school, and the fire-exit drill regulations of each school.

Findings and Conclusions:

Most school systems have a program in safety education and several different teaching methods were being employed. Many inadequacies in protection for children in the proximity of schools existed. Fire-exit drills and accident reporting need to be improved.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Ginther, , Richard , Earl
(Last name) (First name) (Middle name)

Exact Title AN ANALYSIS OF OPINIONS CONCERNING GRADUATE PROGRAMS IN INDUSTRIAL EDUCATION.

Degree granted Ed. D. , Date 1964 , No. of pages in report 188

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine the extent to which specialized technical, research, teaching, administrative, and liberal education competencies are being developed in graduate industrial education programs.

Source of Data and Method of Study:

Data was secured through information forms, furnished materials, and college catalogs from 86 colleges and universities.

Findings and Conclusions:

1. Most institutions offer master's credit for thesis, but few require a thesis.
2. Opportunities for developing teaching and administrative competencies appear to be sufficient since one third of course work is professional industrial arts courses.
3. Specialist and doctoral degrees usually require teaching experience.
4. One fourth of courses are usually professional education, other than industrial education.
5. An increased number of provisions for developing specialized technical competencies is probably needed.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Gisriel (Last name), Austin (First name), E. (Middle name)

Exact Title THE DEVELOPMENT AND ANALYSIS OF AN INSTRUMENT DESIGNED TO MEASURE WORK ATTITUDES, USING SELECTED GROUPS OF STUDENTS AND EMPLOYEES.

Degree granted Ed. D., Date 1959, No. of pages in report 301

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To develop an instrument designed to measure general work attitudes of employees and to ascertain general factors, specific understandings, knowledge, and feelings that may have affected the employee's work attitudes.

Source of Data and Method of Study:

A review of the literature was made, and from various definitions of work attitudes an instrument was developed, consisting of assorted items that could possibly affect an employee's work attitudes. The instrument was pretested and refined and then tested on a sample of 103 employees. The instrument was validated by correlating it with the immediate supervisor's rating of an employee's work attitudes on an overall rating scale.

Findings and Conclusions:

The reliability of the instrument was found to be consistent with the reliabilities of similar instruments designed to measure various kinds of attitudes. The split-half reliability coefficient for 87 cases on the field test group was 0.744, corrected by the Spearman-Brown formula to 0.853.

The instrument was validated by comparing the rating of the employee with the rating by their immediate supervisors using the over-all scale, Scale A. An adjusted contingency coefficient of 0.46 indicated the magnitude of the relationship. A complete evaluation of this instrument would require further and more extensive study with respect to different kinds of employees, supervisors, and employment organizations.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Glazener (Last name), Everett (First name), Ruthven (Middle name)

Exact Title An Experimental Determination of the Value of Selected Visual Aids in Teaching Beginning Mechanical Drawing.

Degree granted Ed. D., Date 1958 No. pages in report 136

Granted by Pennsylvania State University (Name of institution) University Park, Penn. (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of study: To determine the differential effects of two techniques of instruction in beginning mechanical drawing at the junior high school level. To investigate the value of selected visual aids (not including film) during the first eighteen to twenty-seven clock hours in teaching drawing, and whether selected visual aids enable students to increase their achievement of manipulative technique in certain units of a first course in mechanical drawing.

Source of data and method of study: With the assistance of a jury, certain visual aids applicable to the selected units were chosen and constructed for use in all experimental classes. During the spring semester of the school year 1956-57, fourteen classes of beginning mechanical drawing in four junior high schools in Pennsylvania were used with certain classes being designated as control and experimental.

Findings and Conclusions: Some of the conclusions were: (1) Certain results tend to support the hypothesis that the achievement of students in selected units of beginning mechanical drawing is greater when selected visual aids are utilized in addition to traditional methods; (2) when comparing results of the control and experimental groups in the criteria with the pre-test mental age, the experimental group made more progress than the control group; (3) there appeared to be more interest, more attention, more general comprehension and understanding, less noise, and more motivation and participation by students in the experimental classes than by students in control classes.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Glismann (Last name), Leonard (First name), W. (Middle name)

Exact Title THE EFFECTS OF SPECIAL ARTS AND CRAFTS ACTIVITIES ON ATTITUDES, ATTENDANCE, CITIZENSHIP, AND ACADEMIC ACHIEVEMENT OF SLOW LEARNING NINTH GRADE PUPILS.

Degree granted Ed. D., Date 1967, No. of pages in report 199

Granted by Utah State University (Name of Institution) Logan, Utah (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study·

The purpose of this study was to develop three special programs in the arts and crafts area and determine their effectiveness in motivation and changing the attitudes toward school of slow learning ninth grade pupils having low academic motivation.

Source of Data and Method of Study·

Five arts and crafts classes were selected from three junior high schools within the Salt Lake City School District. Pupils were pretested to provide statical control. Data were obtained from six sources; a Likert-type pre-test, attitude scale and a post-test attitude scale which was a modification of the pre-test, eighth and ninth grade records of attendance, citizenship, and academic achievement, Pupil's Success Estimate Sheet, and Teacher Rating Sheet for end of year evaluation.

Findings and Conclusions;

1. Based upon the results obtained from the administration of the attitude scale expecially prepared, the special treatment offered the experimental groups did not bring about a change of attitude toward art, arts and crafts, and industrial arts that was statistically significnat.
2. On the basis of data obtained from the Estimate of Pupil's Success scale, administered only to the pupils in the experimental groups, the findings did not reveal a statistically significant change in the pupil's self perception toward his arts and crafts perfomance when comparing the pupils in the three junior high schools.
3. Based upon the results obtained on pupil attendance and citizenship marks, in both the eighth and ninth grade, there was not a statistically significnat improvement in school attendance or changes in citizenship marks by the pupils in the special arts and crafts experimental treatment.
4. On the basis of the data collected on academic grades in English, mathematics social studies, and science for both the eighth and ninth grade performance, the experimental groups made gains in mathematics achievement that were statistically significant.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Goetz, Robert, Edward
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL PRINTING PRACTICES COMPARED WITH THE TEACHING OF PRINTING IN POST-HIGH SCHOOL INSTITUTIONS.

Degree granted Ed. D., Date 1958, No. of pages in report 232

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the current practices in selected graphic arts areas, the machines used in these areas, the attitudes of industry toward educational teaching methods, and how these findings compare with like factors in the post-high school institutions offering vocational courses in printing.

Source of Data and Method of Study:

(1) Information forms mailed to 1,004 job-printing plant owners or managers of the United States having 15 or more workers engaged in graphic arts and (2) information forms mailed to all post-high school institutions in the United States offering vocational printing curriculums. Critical ratio techniques were used in handling the data.

Findings and Conclusions:

The training areas in the post-high school institutions and the commercial printing areas are not closely related. The institutions seem to be slow in adopting training areas in offset printing. There is not a close relationship between practices followed in training programs for printers at the post-high school level and those used in industry. A close relationship does exist between the teaching and learning methods used by post-high school printing teachers and the acceptance of these methods by tradesmen. The institutions are providing vocational training on a minimum number of different types of machines and do not have the modern expensive printing equipment used in commercial printing plants.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Golomb (Last name), Arthur (First name), E. (Middle name)

Exact Title A GUIDE TO PLASTICS IN THE INDUSTRIAL ARTS PROGRAM OF THE ACADEMIC HIGH SCHOOLS OF NEW YORK CITY: AN EVALUATION OF THE EXTENT TO WHICH PLASTICS IS TAUGHT, AND DEVELOPMENT OF A GUIDE TO IMPLEMENT PLASTICS EDUCATION IN EXISTING SHOP AREAS. PART ONE: THE INVESTIGATION. PART TWO: THE GUIDE.

Degree granted Ed. D. ,Date 1962 ,No. of pages in report ___

Granted by New York University (Name of Institution) New York City, New York (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purposes of this investigation was to determine the status of plastics education in the industrial arts shops of the academic high schools of New York City to make recommendations for the implementing plastics into the presently operating industrial arts programs.

Source of Data and Method of Study:

A questionnaire was developed and sent to forty-nine chairmen of industrial arts programs currently employed in academic high schools for the purpose of ascertaining the extent to which plastics is taught in the industrial arts shops.

Findings and Conclusions:

1. Students need a greater understanding of plastics.
2. Greater emphasis should be placed on industrial methods for using plastics.
3. Motion pictures about the plastics industry are readily available.
4. Improved designs for plastic projects should be developed.
5. Research pertaining to modifications of industrial plastics equipment for educational purposes should be encouraged.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Graney, (Last name), Maurice (First name), R. (Middle name)

Exact title THE CONSTRUCTION AND STANDARIZATION OF THE PURDUE MECHANICAL ASSEMBLY TESTS.

Degree granted Ph.D., Date 1942, No. of pages in report 81

Granted by Purdue University (Name of institution) Lafayette, Indiana (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Nine original mechanical assembly units were developed for the measurement of aptitude. The test was administered to 338 people in five different groups in an effort to obtain positive correlation with merit, rating, grades, and instructor ratings.

Source of Data and Method of Study:

Information not available.

Findings and Conclusions:

Information not available.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Griffin, Raymond, V.
(Last name) (First name) (Middle name)

Exact Title AN ANALYSIS OF SLECTED SCIENCE CONCEPTS TO DETERMINE INDUSTRIAL ARTS RELATED EXPERIENCES SUITABLE FOR AN INTEGRATED ELEMENTARY INDUSTRIAL ARTS PROGRAM AT THE INTERMEDIATE GRADE LEVELS.

Degree granted Ed.D. Date 1965 No. of pages in report 197

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To identify specific desirable industrial arts related experiences which contribute to the understanding of the concepts found in the most commonly used science textboods on the intermediate grade levels of four, five, and six.

Source of Data and Method of Study:

228 superintendents throughout the United States were asked to indicate the science textbooks used in their systems for Grades: 1V, V, and VI. Data were collected for this study through a postcard questionnaire, a questionnaire to select scienee concepts having industrial arts related experiences, and a Related Experience Inquiry Form.

Findings and Conclusions:

1. There was agreement among all groups of participants that selected industrial arts related experiences can make a contribution to the understanding of the science concepts included in this study.
2. The elementary teachers and elementary industrial arts coordinators had presented numberous industrial arts related experiences in their science programs.
3. There was agreement among the participants of this study that there are specific industrial arts related experiences which contribute to the understandings of selected science concepts for Grand IV.
4. There was agreement among the participants of this study that there are specific industrial arts related experiences which contribute to the understandings of selected science concepts for Grade VI.
5. There was agreement among the participatns of this study that there are specific industrial arts related experiences which contribute to the understandings of selected science concepts for Grade V.
6. The teacher education institutions attended by the members of the American Council for Elementary School Industrial Arts had provided the necessary education for presenting the industrial arts related experiences included in this study.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Groneman (Last name), Chris (First name), H. (Middle name)

Exact Title A CRITICAL EVALUATION OF THE DEVELOPMENT OF JUNIOR (MODEL) AVIATION INSTRUCTIONAL PROGRAMS FOR SCHOOLS, RECREATIONAL CENTERS AND MODEL ENTHUSIASTS.

Degree granted Ed. D., Date 1950, No. of pages in report 537

Granted by The Pennsylvania State College (Name of insitution) State College, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To stimulate the interest of education and recreational leaders toward the favorable consideration of junior (model) aviation.

Source of data and method of study:

A survey was made which included review of educational aviation material of State Departments of Education, previous similar studies, books and periodicals, and other research making reference to model aviation. A statistical analysis was made of 231 commercial model airplane kits representing 39 model airplane manufacturers. The study was supplemented by 78 people representing education, recreation, and industry in 23 States. Indstructional materials were prepared and tested in 2 large city school systems, and in one large city park recreational center.

Findings and Conclusions:

Most State aviation educational programs were decidedly tentative and in a condition of flux, due to the nebulous stage of aviation education. More emphasis is given aviation education in the secondary school than in the elementary. Relatively minor emphasis has been given to the use of model airplanes in teaching aviation education. Several serious problems face educational authorities in the field of model aeronautics. These are: Determining the proper content with reference to interest of aviation education in elementary schools; selecting and classifying most effective instructional materials; providing for adequate in-service training programs in aviation education. Interest and activity shown for development of additional teaching materials for aviation education and model plane building. There is a need for a manual to organize clubs and promote the building of model airplanes.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE & AIAA - NAITTE

Author Grote, Charles, Nelson
(Last name) (First name) (Middle name)

Exact Title A Comparison of the Relative Effectiveness of Direct-Detailed and Directed-Discovery Methods of Teaching Selected Principles of Mechanics in the Area of Physics.

Degree Granted Ph. D. Date 1960 No. pages in report 337

Granted By University of Illinois Urbana, Illinois
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To provide additional formal research regarding the relative effectiveness of two comparative methods of teaching technical materials. The design permitted a test for difference between groups on the basis of an ordering of treatment sequences, as well as testing for differences between differential treatment groups.

Source of Data and Method of Research: An analysis of variance factorial design, by sex by levels by treatment was employed in this experiment. Three ability levels were established on the basis of an outside criterion. Following the first instructional period, the two initial experimental groups were sub-divided to form a total of four treatment groups. A single control was maintained throughout the experiment.

Subjects were randomly selected from a single eighth-grade class in a suburban junior high school. Experimental groups were taught selected principles of mechanics, as they apply to groups of simple machines. The two experimental sessions, spaced 8 days apart, provided approximately 39 minutes of instruction during each session. All oral instruction was presented by tape recordings. The control group was uninstructed but participated in the testing program.

Six criterion tests were administered during four testing sessions. Initial learning tests were given after each instructional period and a combination retention and transfer test was administered at 1 and 6 weeks following instruction. All tests were multiple-choice power tests.

Findings and Conclusions: The analysis of variance design was employed for the primary statistical treatment of data by treatment comparisons. From this analysis, it was found that: (1) The group instructed by the direct-detailed method was superior to the directed-discovery group as measured by the first initial learning test. However, there was no difference between these groups when measured for initial learning following the second lesson, or for retention and transfer at 1 and 6 weeks. (2) The group taught two lessons by the direct-detailed method was superior to the group taught by the direct-detailed method followed by the directed-discovery method as measured for retention at 1 and 6 weeks. The group taught by the directed-discovery method followed by the direct-detailed method was superior to the direct-detailed groups as measured by the 1-week transfer test. (3) The group who had been taught by the directed-discovery method preceding the direct-detailed presentation was superior to the group taught by the reverse sequence, when measured for initial learning following the second instructional period, and for retention at 6 weeks. The same sequence was superior when measured for transfer at 1 week. (4) When a difference in achievement was found on the basis of the sex variable, the male subjects were superior to the female subjects as measured by the criterion tests. (5) The relative effect of the methods, as well as certain treatment sequences, were dependent, in part, upon the sex and/or ability level of subjects.

289

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Gruber (Last name), Herbert (First name), H. (Middle name)

Exact Title A STATE PLAN FOR SUBSIDIZING VOCATIONAL EDUCATION IN PENNSYLVANIA.

Degree granted Ed.D. Date 1942 No. of pages in report ____

Granted by Pennsylvania State College (Name of Institution) State College, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An analysis of the present plan for the apportionment of state and federal funds to local districts. A formula for apportioning vocational funds is developed in an effort to satisfy more effectively the objectives for which the funds were created.

Source of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL EDUCATION
JOINT RESEARCH COMMITTEE - ACIATE - NAITTE - AIAA

Author Grumbling, Henry, Maner
(Last name) (First name) (Middle name)

Exact Title Dial Access Information Retrieval Systems in Higher Education and Implications for Establishing a System at Colorado State College.

Degree granted , Ed. D., Date Aug. 1968 No. of pages in report: 322

Granted by Colorado State College Greeley, Colorado
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E. R. I. C. ( )

Purpose of Study: Identify where and how dial access systems are being used in higher education. Orient the Colorado State College Faculty to dial access systems and determine if the faculty could use such a system on the Colorado State College Campus.

Source of data and method of study: The survey method of research was used in the study. The data was gathered from 110 colleges or universities which were reported to have had operating dial access systems. The data acquired was used to help design an audiovisual program which was presented to the full-time faculty members of Colorado State College. After the orientation was completed, the faculty members indicated on a response form how they could use a dial access system in their teaching.

Findings and Conclusions: Eighty-seven institutions of higher education were found to be using dial access. The dial stations were located in language laboratories, learning centers, libraries, classrooms and dormitories. The audio only systems were most often used. Foreign languages, music, political science, history, English, literature, business and biological science courses were used most often with the dial access approach.

About 20 per cent of the Colorado State College Faculty indicated they could use a dial access system in their teaching. The faculty members listed 190 courses with which this type of system might prove useful.

More large universities will use dial access systems in the future. There will be more audio/video dial access systems installed in the near future. Greater consideration will be given to locating dials learning centers and dormitories. Also computer access by push-button dialing will become common. Colorado State College could make use of an Audio/Video Dial Access Information Retrieval System.

291

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Gunderson (Last name), B. (First name), Harry (Middle name)

Exact Title MATHEMATICAL APPLICATIONS FOR THE MACHINE SHOP TRADE EXTRACTED FROM TRADE BLUEPRINTS.

Degree granted Ed. D., Date 1949, No. of pages in report 181

Granted by Indiana University (Name of institution) Bloomington, Indiana (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine mathematics used by a machinist in working from blueprints. (This was limited to the mathematics required by the operative, apprentice joureymen and master machinists, as well as that used by tooling, designing and fabricating engineers in producing the prints from which machinists work.)

Source of data and method of study:

Author gathered 5,101 blueprints from 25 midwest machine shops ranking in size from 5 to 4,500 employees. A list was compiled of all the mathematical applications found on these blueprints. Lists were then submitted to the 25 cooperating establishments for rating on a three-point scale involving the necessary, desirable or unncessary mathematics for the operative, apprentice, journeyman and master machinist.

Findings and Conclusions:

This study has produced evidence that applications of mathematics have a place in machine shop training. It is also evident that the satisfactory placement of the mathematics is one of the chief problems in a training program. It is not enough for the worker to know the fundamentals of mathematics but the industrialists insist that these fundamentals be treated in their special machine shop applications. The 4 fundamental processes of arithmetic are necessary to machine shop mathematics but the special applications of these processes must be known before satisfactory emphasis for the training program can be ascertained. Implications for training in applications of mathematics are that the mathematics processes are a part of machine shop practice and not separate and divorced from it.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Gunther (Last name), Theresa (First name), Charlotte (Middle name)

Exact Title THE MANIPULATIVE PARTICIPATION IN THE STUDY OF ELEMENTARY INDUSTRIAL ARTS.

Degree granted Ph. D., Date 1931, No. of pages in report 438

Granted by Columbia University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Compare the value of the conventional method of studying the facts from books with the manipulative participation method. It includes pupils studying industrial arts in the elementary grades. Two units of subject matter were studied in each of thirteen classes, selected from grades three to six.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Haigwood (Last name), Thomas (First name), L. (Middle name)

Exact Title A STUDY OF DESEGREGATION PROBLEMS THAT MAY AFFECT THE INSTRUCTIONAL PROGRAM OF JUNIOR HIGH SCHOOL INDUSTRIAL ARTS IN NORTH CAROLINA.

Degree granted Ed. D., Date 1959, No. of pages in report 243

Granted by Pennsylvania State University (Name of institution) University Park, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

(1) To ascertain real differences of instructional problems in junior high school industrial arts in Negro and white segregated schools of North Carolina, and segregated and desegregated schools of the border States; (2) To ascertain teachers' opinions on the actual and expected effects of desegregation on instructional problems; and (3) To study instructional practices and techniques used by successful teachers of desegregated classes.

Source of Data and Method of Study:

Questionnaires sent to junior high school industrial arts teachers in segregated and desegregated schools.

Findings and Conclusions:

Findings indicate that more serious instructional problems exist in Negro than in white segregated industrial arts programs of North Carolina. Desegregated programs have more serious problems in the border States, than segregated programs. Teachers of desegregated industrial arts programs of border States experienced a greater increase in instructional problems due to desegregation than teachers of a segregated school. Questionnaire respondents believed teachers should plan courses for wider abilities and background, have a more tolerant attitude toward Negro students, and have greater control.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hackett, Donald, F.
(Last name) (First name) (Middle name)

Exact Title THE STATUS AND NEED FOR INDUSTRIAL EDUCATION IN GEORGIA.

Degree granted Ed.D., Date 1953, No. of pages in report 183

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the status and need for industrial education in the white public schools of Georgia.

Source of Data and Method of Study:

Information was obtained by means of information forms and interviews, from records in the State Department of Education, and from the United States Census. Requirements for employment in the manufacturing industries, trends in industrial employment, and opinions of employers, school administrators, parents, and high school graduates were analyzed for their implications.

Findings and Conclusions:

There were 146 industrial arts teachers in eighty-nine schools in sixty-five Georgia cities with an average salary of $3,417 in 1952-53. Three-fourths of the industrial arts programs had been in operation less than fifteen years. General shop courses were provided in fifty-four of the seventy-two schools reporting. The twenty diversified cooperative programs in Georgia enrolled 470 trainees in sixty-two different occupations in 1952-53; average salary of coordinators was $3,560; eleven programs had been in operation less than ten years. Fifty day-trade teachers were found in ten schools with an average salary of $3,689 in 1952-53; these programs enrolled 759 high school students in twenty different day-trade classes. High school graduates and parents were overwhelmingly in favor of some form of industrial education being provided in the public schools of Georgia. Employers ranked mathematics, English, trade training, and industrial arts first, second, third, and fourth, respectively, in importance among school subjects. High school administrators reported the probable addition of 160 industrial arts teachers, 34 coordinators, and 19 day-trade teachers in the period 1953-56. The findings of this study would indicate that some form of industrial education is both necessary and desirable in Georgia schools.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hagemeyer (Last name), Richard (First name), H. (Middle name)

Exact Title AN INVESTIGATION OF FACTORS CONSIDERED IN THE SELECTION OF APPRINTICES BY MANUFACTURING COMPANIES IN MICHIGAN.

Degree granted Ed. D. Date 1960 No. of pages in report 257

Granted by Wayne State University (Name of Institution) Detroit, Michigan (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To inventory factors considered in the selection of apprentices and to determine the relative importance of each.

Source of Data and Method of Study:

Data were obtained from a stratified random sample of those Michigan manufacturing companies with apprenticeship programs. Factors studied were: personal and educational qualifications; maximum age limits for applicants; rank importance of factors observed during probationary period; standardized tests used; importance attached to test results; and minimum mean score necessary for consideration as an applicant.

Findings and Conclusions:

1. Neither seniority in the company nor family relationship in the trade were prime requisites to insure consideration as an applicant for apprenticeship training.
2. Possession of the manipulativeskills needed to be immediately productive on the job was considered important especially if the applicant applied for an apprenticeship in a small company. Evidence of a good work experience record was also considered a valuable asset for an apprenticeship applicant.
3. Hobbies which reveal interest and aptitude in mechanical things were considered important in the selection of one applicant over another.
4. Recommendations furnished by an applicant's school were important.
5. Recommendations from provious employers were considered very important in selecting apprentices.
6. Recommendations from firends or acquaintances were not considered important by the large companies, however, small companies in two areas considered this important.
7. High school students planning to apply for apprenticeship in Michigan's manufacturing companies should be encouraged to take courses in algebra, geomentry, shop mathematics, and industrial education.
8. Michigan's manufacturing companies generally used a probationary period as the f final phase of the selection procedure.
9. Only 3.59 per cent of small manufacturing companies in Michigan maintained apprenticeship programs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hall (Last name), Clyde (First name), Woodrow (Middle name)

Exact Title A SURVEY OF INDUSTRIAL EDUCATION FOR NEGROES IN THE UNITED STATES UP TO 1917.

Degree granted Ed. D., Date 1953, No. of pages in report 275

Granted by Bradley University (Name of institution) Peoria, Illinois (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To compile, interpret, and present information concerning industrial education for Negroes in the United States prior to 1917.

Source of data and method of study:

Data were obtained from catalogues, bulletins, proceedings, books, magazines, and reports.

Findings and Conclusions:

This study reveals the nature of industrial education offered Negroes during slavery and the period between the Civil War and the passage of the Smith-Hughes Act. Negro slaves received industrial training before the Civil War through apprenticeship programs operated by the plantation or settlement. Manual labor schools for free Negroes were started in the North between 1830 and 1860 to counteract the refusal of skilled mechanics to apprentice Negroes. Tuskegee Normal and Industrial Institute and Hampton Normal and Agricultural Institute were the largest industrial schools for Negroes prior to 1917.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hall, James, F.
(Last name) (First name) (Middle name)

Exact Title PRINCIPLES AND POLICIES OF TECHNICAL INSTITUTE EDUCATION INCLUDING A STUDY OF THE PRESENT PROGRAM AT THE INSTITUTE OF APPLIED ARTS AND SCIENCES, NEW YORK CITY.

Degree granted Ed.D., Date 1954, No. of pages in report 210

Granted by Columbia University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To examine the program of the New York Technical Institute with the history and evolution of post-high school technical education in the United States.

Source of data and method of study:

Data were obtained from a study of the organization of the Institution and other similar educational centers in the United States.

Findings and Conclusions:

The Institute is making a valuable contribution today and can do even more in the future. This substantiates the philosophy that the technical program in New York State will never fail to meet the challenges and needs of a changing industrial society.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hamilton (Last name), Allen (First name), Thurman (Middle name)

Exact Title TRADE TEACHER TRAINING IN THE UNITED STATES UNDER STATE PLANS OF 1937.

Degree granted Ed.D., Date 1941, No. of pages in report ____

Granted by Indiana University (Name of institution) Bloomington, Indiana (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This study attempts to determine certain facts relative to agencies, organizations, costs, and enrollment in the field of teacher training. It considers the status of the work of teacher training the field of trade and industrial education under the provisions of the state plans for the five year period, 1937-1942.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hammack (Last name), Charles (First name), Robert (Middle name)

Exact Title EFFECTIVENESS OF PERSONNEL POLICIES AND PRACTICES EMPLOYED BY DEPARTMENT CHAIRMEN AND SATISFACTION OF INDUSTRIAL TEACHER EDUCATION FACULTY MEMBERS.

Degree granted Ed.D., Date 1967, No. of pages in report 273

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain (1) the reactions of depattment chairmen concerning the relative effectiveness of personnel policies and practices they employ, and (2) the satisfaction of college level industrial education personnel with regard to their positions.

Source of Data and Method of Study:

All colleges and universities reporting teacher education programs in the 1966 Industrial Teacher Education Directory were sent information forms. Department chairmen, newly appointed teachers, present teachers appointed prior to 1961, and teachers that had resigned between 1963 and 1965 were each sent forms to determine the information needed for the study.

Findings and Conclusions:

1. Faculty participation in administrative decisions, tenure, and institutional staff benefits were considered to be most effective in the retention of personnel.
2. The three groups of teachers are, in general, satisfied with (1) their participation in administrative decisions, (2) faculty or staff benefits, (3) personnel services, and (4) physical facilities.
3. College policies concerning promotion and salary increases are a major source of dissatisfaction for all groups of industrial education teachers.
4. Dissatisfaction with communications between the administration and the staff seems to be one of the primary causes of resignations.
5. Improvements are needed in faculty salaries and in facilities for research in order to increase faculty morale and satisfaction.

SOURCE SHEET FOR SUMMAREIS OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hammer, (Last name), Garland (First name), G. (Middle name)

Exact Title THE RELATION OF TRADE AND INDUSTRIAL SCHOOL EDUCATION TO APPRENTICESHIP TRAINING.

Degree granted Ed.D., Date 1951, No. of pages in report 260

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the existing and desired relations of trade and industrial school education to apprenticeship training.

Source of Data and Method of Study:

Data for the study were secured through inquiry forms sent to educators and to representatives of management and labor who were working with apprenticeship training and trade and industrial school education. From the tabulated data, a comparison of the opinions of these three groups was made.

Findings and Conclusions:

There is need for better selection of apprentices based on interest, ability, previous training, and work experience. Although apprenticeship may have been more successful in training workers for the skilled trades than the day-trade school, there is definite need for pre-employment trade training to lay a foundation for apprenticeship and to serve non-apprentiable occupations. A definite number of hours of related instruction, varying with the trade, should be required of apprentices. Such instruction should be better organized and more closely related to on-the-job training. Better supervision of related instruction is needed, and this should be done by public school personnel. There is general agreement on the qualifications of instructors, supervisors and administrators of apprenticeship training. A need exists for a more positive attitude toward apprenticeship training. State apprenticeship counsels tend to improve apprenticeship training and should be encouraged. Both the state departments of labor and education should act in an advisory capacity concerning apprenticeship training.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hammond (Last name), Robert (First name), Grove (Middle name)

Exact Title EVOLVING CONCEPTS OF INDUSTRIAL EDUCATION IN THE THINKING OF THE INDUSTRIAL EDUCATOR.

Degree granted Ed. D., Date 1956, No. of pages in report 282

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To trace the evolution of certain underlying concepts of industrial education in the thinking of industrial educators which have affected the growth and expansion of the program, and to analyze and interpret ideas of industrial educators toward certain major issues involved in the program of industrial education as it has developed in America.

Source of Data and Method of Study:

A study was made of the writings of persons of recognized status directly connected with the industrial education movement, and the proceedings and annals of selected organizations.

Findings and Conclusions:

Industrial education, conceived as a multipurpose area of education, continues to be supported in terms of both general and vocational education--increasing the appreciation and understanding of industrial society, vocational competency, and successful citizenship--have changed little since its introduction into American schools. Objectives cited for industrial arts have tended to become more closely aligned with, and less distinguishable from, objectives cited for other subject areas in general education. Despite phenomenal growth and popularity, relatively little stability has developed within the scope and management of the general shop. Industrial educators have been in sympathy with programs of training that increase the occupational mobility of workers. The industrial educator's concept of guidance and vocational-industrial education has gradually expanded to include these as indispensable phases of a total program of occupational adjustment.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hampton, Jr. (Last name), Isaac (First name), Paul (Middle name)

Exact Title AMATEUR RADIO OPERATION IN MISSOURI AND ITS IMPLICATIONS FOR INDUSTRIAL ARTS EDUCATION.

Degree granted Ed. D., Date 1959, No. of pages in report 114

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain important experiences, viewpoints, and activities concerning amateur radio operation in Missouri, and the implications of this hobby for industrial arts and adult education programs in Missouri.

Source of Data and Method of Study:

An information form sent to 1,000 Missouri residents who held amateur radio operator's licenses.

Findings and Conclusions:

The amateur radio hobby in Missouri has experienced considerable growth in the last decade. The average hobbyist has a better-than-average income and education when compared with all Missouri residents. More hobbyists indicated they were professional people, technicians, or high school or college students than any other occupational category. A negligible number of the respondents indicated they had received help in their radio hobby through science or industrial arts courses taken in the public school. A sizable majority indicated the opinion that the schools should expand their offerings in the fields of electricity and electronics.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hampton (Last name), Thomas (First name), Edgar (Middle name)

Exact Title A SURVEY OF TECHNICAL OCCUPATIONS IN LOUISIANA WITH IMPLICATIONS FOR TECHNICAL EDUCATION.

Degree granted Ph. D., Date 1950, No. of pages in report 237

Granted by Cornell University (Name of institution) Itaca, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the educational programs of a technical institute nature that should be added to the present programs of the Louisiana trade schools.

Source of data and method of study:

A state-wide survey was made covering 8 manufacturing and 8 nonmanufacturing industries including 275 establishments to determine number of technicians employed. The State was divided into six geographical areas and analyzed for distribution of technical occupations, vocational facilities lending themselves to technical education, and availability of students. Technical occupations were grouped in clusters to form technical curriculum groups.

Findings and Conclusions:

The technical occupations in accounting, banking, construction, heat and power, mechanical, petroleum production are generally distributed throughout the State with no significant concentration. Occupations in industrial instruments and industrial laboratory are concentrated in three distinct areas. Petroleum production is concentrated in four areas. Graphic arts technical occupations are highly concentrated in one area. The study recommends two-year technical curricula, the number of students for whom provision should be made, and the areas in which the curricula should be offered.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAIT

Author Hahn, Bruce, Jackson
(Last name) (First name) (Middle name)

Exact Title A STUDY OF STATE ASSOCIATIONS FOR INDUSTRIAL ARTS TEACHERS, WITH RECOMMENDATIONS FOR THE COLORADO ASSOCIATION.

Degree granted Ed.D., Date 1953, No. of pages in report 223

Granted by Colorado State College of Education Greeley, Colorado
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To make recommendations which might improve the effectiveness of state associations for teachers of industrial arts.

Source of Data and Method of Study:

Data were secured from a questionnaire sent to all state industrial arts associations and a questionnaire sent to Colorado industrial arts teachers.

Findings and Conclusions:

State association presidents believe purposes of state association to be: exchange of information and opinion for improvement of instruction; promotion of industrial arts among patrons, administrators, teachers and pupils; and evaluation of present programs and methods. Colorado teachers listed their preferences as to number of meetings, cost, kind of meetings, how to keep informed, and projects to be carried out.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author	Haney,	Philip	Heller
	(Last name)	(First name)	(Middle name)

Exact Title THE NEED FOR VOCATIONAL TRAINING IN THE BAKING INDUSTRIES OF ESSEX COUNTY

Degree granted) Ed.D. , Date 1949 , No. of pages in report 337

Granted by	Rutgers University	New Brunswick, New Jersey
	(Name of institution)	(City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To discover whether there was a need for vocational training in the baking industries of Essex County. To suggest the nature of the training program if such training is advisable.

Source of Data and Method of Study:

Interview of 300 representatives of the baking industry of Essex County, Federal Departments and bureaus, trade association, training institutions, and individuals who have been active in the baking phase of the vocational field.

Findings and Conclusions:

Economic conditions through large-scale operation and increasing number of baking establishment failures suggest the advisability of establishing training programs for workers in the baking industry. Local education authorities are interested in establishing training programs for the baking industry, but need the help of the industry to formulate plans. Workers employed in the baking industry are interested in being provided with an opportunity to obtain training in the specific phases of the baking industry. A majority of the persons interviewed favor: a trade preparatory course that requires three years for completion, a course which would admit persons between 15 and 16 years of age, a comprehensive course that will include instruction in all phases of the baker's occupation, and the use of instructors who have had practical experience in the field of baking.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hankammer, Otto, Alfred
(Last name) (First name) (Middle name)

Exact Title GRADUATE PROGRAMS IN INDUSTRIAL ARTS EDUCATION WITH SPECIAL REFERENCE TO THE MASTER'S DEGREE.

Degree granted Ph.D., Date 1936, No. of pages in report 187

Granted by Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An investigation of institutions in the United States offering major graduate work in industrial arts education leading to master's degrees during the years 1935--1936, in an effort to determine the status of graduate programs in industrial arts.

Source of data and method of study:

The source of data came from the catalogs of the thirty-nine institutions offering industrial arts at the graduate level. The catalogs were augmented by questionnaire to the deans of the graduate schools and the heads of industrial arts departments.

Findings and Conclusions:

The two objectives dominating graduates are (1) the research aim, (2) the teaching aim. The instructional staff is part of the graduate faculty. Gaining admission to graduate school is done with comparative ease. Admission to candidacy is contingent upon quantitative and qualitative measures. No foreign language is required. The program of study is an important feature of graduate work. Some programs require a thesis. Final examinations at the end of the course work are the rule rather than the exception. The doctorate being the requisite degree for graduate instructorship. An adequate library and laboratory are indispensible requisites of graduate programs. There is considerable confusion as to what constitutes graduate courses.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hankin, Edward, K.
(Last name) (First name) (Middle name)

Exact Title A STUDY OF THE RELATIONSHIPS BETWEEN THE CHARACTERISTICS AND THE EDUCATIONAL ATTAINMENTS OF PUPILS IN THREE MECHANICAL CURRICULUMS.

Degree granted Ed.D., Date 1947, No. of pages in report 114

Granted by Universtiy of Pennsylvania Philadelphia, Pennsylvania
(Name of institution) (City, State)

Where Available: Micorfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The records of 638 pupils were studied in an effort to improve the selection of pupils for vocational schools. It includes a description of an experimental technique developed for making comparisons.

Source of Data and Method of Study:

The subjects included in the study graduated or dropped from the Automobile Maintenance, Applied Electricity, and Machine Shop Practice curricula during the two-year period from September, 1944 to September, 1946. Data for each subject included name; date admitted, date of birth, curriculum; previous school marks in shop, English, social studies, mathematics, science, and cooperation; school attendance during year prior to enrollment; interview rating; IQ derived form the Philadelphia Mental Ability Test; IQ, EQ, and raw scores of Otis Classification Tests I and II; Stenquist Test I raw score; score for Mennesota Paper Form Board Test; marks earned at Dobbins; scores for entrance tests in mathematics; scores for city-wide tests in English usage, reading, and arithmetic; and type of previous school.

Findings and Conclusions:

1. Pupils entering younger made somewhat higher marks than older pupils and remained considreably longer.
2. Pupils admitted with good records from public and Roman Catholic high schools did better than average pupils from junior high schools, and preference for these is recommended.
3. The relationships found between these IQ's and success at Dobbins are positive, low, and erratic.
4. The ratings given to applicants by teacher-interviewers were found to have positive but low relationships with success.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL AR[illegible]TION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hanks (Last name), William (First name), S. (Middle name)

Exact Title COMPARISON OF TWO METHODS FOR ENCOURAGING IDEATIONAL FLUENCY IN INDUSTRIAL ARTS DESIGN.

Degree granted Ed. D., Date 1966 No. of pages in report

Granted by The Pennsylvania State University (Name of Institution) University Park, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

It was noted in the literature that capable teachers with a basic understanding of creativity were able to supplement classroom instruction with aids and special activities. In this study the effects of two methods of problem assignment and procedure upon the ability to produce a quantity of ideas was tested.

Source of data and method of study:

Subjects were 118 freshmen industrial arts education majors enrolled in an I.A. design course. Two treatments and a control group were used over a 15 week semester: 1. Design students with minimal restrictions, 2. Design students with maximal restriction, and 3. Non-design student control. Data gathered were pretreatment and posttreatment test scores on a measure of creative ability.

Findings and Conclusions:

-Subjects in the minimally restricted group produced significantly more creative ideas than did subjects in the maximally restricted group. Both treatment groups produced significantly more creativeideas than did the control group.
-It was concluded that it is better to encourage idea productivity in an industrial arts design course by providing experience for finding and refining ideas in problem selection than by a more restricted approach.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hansburg, Henry,
(Last name) (First name) (Middle name)

Exact Title THE USE OF THE PRINT SHOP IN THE IMPROVEMENT OF SPELLING, READING AND VISUAL PERCEPTION.

Degree granted Doctors, Date 1935, No. of pages in report

Granted by Teachers College, Columbia University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

310

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hansen (Last name), Max (First name), E. (Middle name)

Exact Title INDUSTRIAL TECHNOLOGY AND THE ENGINEERING WITHDRAWAL.

Degree granted Ed. D., Date 1964 No. of pages in report 217

Granted by Colorado State College (Name of institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To determine the extent of the need for degree curricula in industrial technology at the University of Nebraska. Specifically the purpose of this study was to determine: (1) the scope and success of degree curricula in industrial technology in selected institutions; (2) the need for and type of degree curricula in industrial technology as expressed by selected industrial representatives; and (3) the interest in and the ability for studies in industrial technology curricula as indicated by data gatehered on engineering withdrawals at the University of Nebraska.

Source of Data and Method of Study:

The methods and procedures necessary in the pursuit of this study included a letter of inquiry to engineering deans, review of literature, survey of college catalogs, personal visitations, interviews with industrial representatives, a compilation of data on a sample of engineering withdrawals, interviews with a sample of engineering withdrawals remaining on campus at the University of Nebraska, and a questionnaire-opinionaire sent to a sample of engineering withdrawals off campus.

Findings and Conclusions:

1. There is a crucial need for degree curricula in industrial technology at the University of Nebraska.
2. Degree curricula in industrial technology are broad in scope, highly successful, and dynamic in the institutions which were investigated.
3. Particular kinds of people are needed for the semi-professional levels in industry. Industrial representatives are not prepared to offer curriculum specifics but all those who were interviewed expressed interest in and concern for development in industrial technology curricula.
4. More than one-third of the on campus engineering withdrawals and nearly one-half of the off campus withdrawals indicated an interest in degree curricula in industrial technology. From the factors investigated in this study, engineering withdrawals are capable of pursuing studies in industrial technology.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hansen, Richard, Harold
(Last name) (First name) (Middle name)

Exact Title A STUDY TO IDENTIFY CRITERIA TO BE CONSIDERED WHEN PLANNING INSTITUTIONS FOR CONDUCTING VOCATIONAL AND TECHNICAL EDUCATION PROGRAMS.

Degree granted Ed. D. Date 1967 No. of pages in report 135

Granted by Utah State University Logan Utah
(Name of Institution) (City, State)

Where Available· Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

The major purpose of this study was to identify criteria to be considered when planning institutions for conducting vocational and technical education programs.

Source of Data and Method of Study:

Data were extracted from available literature and questionnaires were sent to all State Superintendents of Public Instruction and State Directors of Vocational Education in the continental United States. Questionnaires were designed to ascertain types of institutions currently in use, planned for the future and recommended personally. Criteria for establishment of institutions gathered from the literature were evaluated by the Superintendents and Directors and also by a panel of experts in vocational and technical education.

Findings and Conclusions:

A total of thirty three criteria were rated by the above individuals. The five criteria receiving the highest ratings were: 1. Numbers of interested high school students, out of school youth and adults who need, want and can profit by vocational and technical eeucation programs. 2. Availability of qualified instructional personnel. 3. Number and kinds of jobs available for students who complete the programs. 4. Financial resources available from local, state and Federal sources. 5. Availability of qualified administrative and supervisory personnel.

It was recommended that each criterion be carefully considered, in light of local circumstances, during the planning and implementation of vocational and technical education institutions.

Based on evidence from the study, it was recommended that all types of institutions. be considered, but if there was still doubt as to the selection, that comprehensive high schools be utilized at the secondary level and that comprehensive community colleges be utilized at the post secondary level.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hansen, Russell, G.
(Last name) (First name) (Middle name)

Exact Title AN EVALUATION OF SELECTED ELEMENTARY SCHOOL INDUSTRIAL ARTS HAND TOOLS - GRADES V AND VI.

Degree granted Ed.D. Date 1964 No. of pages in report 195

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To evaluate six selected industrial arts hand tools and one piece of equipment, the sawhorse workbench, in relation to the body build and sex of fifth and sixth grade pupils to find if there were any significant differences between the child's body build and the success he achieved using nineteen various size and weight industrial arts hand tools. The objective was to determine the hand tools most suited for fifth and sixth grade boys and girls in elementary construction activities.

Source of Data and Method of Study:

The skill tests were conducted with thirty boys and thirty girls on each of two grade levels. One hundred twenty students were weighed, measured, and categorized according to body size, with ten boys and ten girls in each of the three physical body build groups, advanced, normal, and retarded, for each grade level. Each student performed ninteen hand tool operations, one with each of the hand tools selected for this study.

Findings and Conclusions:

Comparing the size and weight of tool best suited for fifth and sixth grade boys and girls to use, it was found that there were some highly significant differences in the use of the coping saws, hand drills, and bit braces.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hanson, Durwin, Melford
(Last name) (First name) (Middle name)

Exact Title EVALUATION OF THE VETERANS ADMINISTRATION REHABILITATION PROGRAM FOR STUDENTS ENTERING IOWA STATE COLLEGE.

Degree granted Ph. D., Date 1956, No. of pages in report 80

Granted by Iowa State College Ames, Iowa
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To investigate the academic achievement of male veteran and non-veteran students who entered Iowa State College without prior college experience.

Source of Data and Method of Study:

The records of Iowa State College. Three groups of students were used: (1) Public Law 16 veterans, (2) Public Law 346 veterans, and (3) nonveterans. Triserial correlations, chi-square, analysis of covariance, multiple regression, and discriminant analysis techniques were employed.

Findings and Conclusions:

The study revealed that Public Law 346 veteran students were superior to the other two groups while Public Law 16 students were superior to the non-veteran student.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hansson (Last name), Kenneth (First name), Sigurd (Middle name)

Exact Title SLOYD, PRE-VOCATIONAL, VOCATIONAL, AND TECHNICAL EDUCATION IN SWEDEN.

Degree granted Ph.D., Date 1966, No. of pages in report 395

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To study the development of Swedish Educational Sloyd and contemporary programs in Sloyd, pre-vocational, vocational, and technical education.

Source of Data and Method of Study:

Libraries, schools, and other institutions were visited in Sweden to gather information which was not available in the United States. Interviews were made.

Findings and Conclusions:

1. Sloyd has evolved and been modified during the twentieth century.
2. Sweden depends on publicly supported vocational education.
3. Vocational education is successful because of cooperation between educators, labor, management, and government.
4. Employment offices perform most of the counseling and placement.
5. In general, facilities and equipment are high quality and modern.
6. American educators and social scientists are studied.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Harlan (Last name), Owen (First name), (Middle name)

Exact Title COMPARISON OF SCHOLASTIC RECORDS OF STUDENTS FROM ACADEMIC, VOCATIONAL, AND TECHNICAL HIGH SCHOOLS IN THE INDUSTRIAL ARTS DIVISION OF A TEACHERS COLLEGE.

Degree granted Ed.D., Date 1953, No. of pages in report 158

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To compare graduates of academic, vocational and technical high schools with respect to their high school records, their abilities and their success in industrial arts teacher-training.

Source of Data and Method of Study:

From the official records of 567 students who matriculated in industrial arts division of the New York State College for Teachers at Buffalo between February 1946 and September 1949, data were taken relative to high school marks, performance on college entrance examinations, and marks in college courses. Correlations techniques were used in handling the data.

Findings and Conclusions:

Although the vocational group had the highest record of high school achievement, it fell below both the academic and technical groups in college achievement. The technical group made the highest record of college achievemnet in spite of relatively low high school achievement records. Grade averages of 90 or above in any of the high school curricula, or part thereof, seemed to indicate ability to satisfactorily complete this program. Grade averages below 75 indicated only a 50-50 chance of graduating from the college. Technical high school graduates seemed to be good prospects for industrial arts education programs and more of these students should be recruited for such programs. Special courses in mathematics English, and science should be offered for vocational high school graduates so that they can correct these deficiencies before they are admitted to the regular industrial arts curriculum. There is a definite need in industrial arts education for more students with a strong high school background.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Harmey (Last name), Leon (First name), T. (Middle name)

Exact Title THE INDLUENCE OF A PROBLEM-SOLVING METHOD OF TEACHING ON CREATIVITY AND DESIGN JUDGEMENT IN INDUSTRIAL ARTS.

Degree granted Ed. D., Date 1967 No. of pages in report ___

Granted by The Pennsylvania State University (Name of Institution) University Park, Pennsylvania (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. To compare the effects of problem-solving and non-problem-solving design experiences in woods, metals, and crafts at the college level on creativity and design judgements of students.
2. To determine reactions to teaching method, course content, and lab facilities.

Source of Data and Method of Study:

Subjects were 147 college industrial arts students enrolled in existing classes in wood technology, metal technology, and craft classes. Seven instructors were used, with one instructor administering both an experimental and control treatment. Students in the experimental group were given freedom in design decisions and were taught using materials intended to encourage creativity and design judgement.

Findings and Conclusions:

-Students enrolled in the experimental wood and metal technology classes scored significantly higher on the test of creative ability than did control group students. There was no difference between control and experimental groups in the crafts area.
-There was a significant difference in course achievement in wood technology with experimental group subjects scoring higher on the test of achievement that control subjects. There was no difference between experimental and control in course achievement in metal technology and crafts.

It was concluded that it is better, in existing laboratory classes, to encourage general creativity by a problem-solving teaching strategy than by the more restricted traditional approach. The problem solving teaching strategy is as effective as the highly structured approach in developing subject matter competency in wood technology and as effective as conventional practice in metal technology and crafts.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Harmon, James, S.
(Last name) (First name) (Middle name)

Exact Title EFFECTS OF A MULTI-MEDIA ENVIRONMENT IN COLLEGE LEVEL ELECTRONICS.

Degree granted Ed.D., Date 1969 No. of pages in report 154

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To assess select learning outcomes within a multi-meida environment, as judged by data obtained within a controlled atmosphere consisting of two Colorado State College industrial arts classes in beginning electronics. Total number of students involved within the study was forty-four.

Source of Data and Method of Study:

Data was obtained from teacher anecdotal records, personal interviews, terms tests, daily activity sheets, and questionnaires. Treatment was by three statistical means Chi Pearson Product-Moment correlations, and linear regression analysis. The level of significance was established at the .05 level. Additional available data included individual scores from the EPPS and GATB test batteries.

Findings and Conclusions:

1. Term achievement scores exhibited a large range, suggesting that the existing multi-media environment may not be suited for all learners.
2. The EPPS and GATB should be retained as effective counseling devices for predicting term achievement, and types of media which are best suited for the individual learner.
3. The present multi-media environment should be modified according to the recommendations listed within this study.
4. I.A. 80, "Basic Electricity," should continue to be offered through multi-media techniques.
5. These findings have a broad range of implications for educators who are considering use of multi-media techniques. Such findings include consideration of methods and recommendations for structure of multi-media offerings.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Harper, Herbert, Druery
(Last name) (First name) (Middle name)

Exact Title THE DEVELOPMENT AND PRESENT STATUS OF THE METAL TRADES AND THEIR TRAINING PROGRAMS WITH SPECIAL REFERENCE TO THE METROPOLITAN AREA

Degree granted Ph. D., Date 1934, No. of pages in report 381

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An analysis of the educational needs in the metal industries. It includes an historical background of the metal industry and its relation to society, government, communications, industrial labor, and wages.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Harris (Last name), Virginia (First name), J. (Middle name)

Exact Title Prediction of Success in a School of Practical Nursing.

Degree Granted Ed. D. Date 1961 No. pages in report 66

Granted By University of Pennsylvania (Name of Institution) Philadelphia, Penn. (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To discover factors or methods for identification of applicants who could be expected to succeed and those who could be expected to fail in the preclinical portion of a 1-year practical nursing program.

Source of Data and Method of Research: The study was limited to the practical nursing program of the Brown Vocational High School from September 1956 to January 1959.

Data were collected for each of 129 practical nursing students concerning age, marital status, religion, race, years of schooling, and scores on six subtests of the General Aptitude Test Battery developed by the Occupational Counseling Services of the U. S. Employment Service. Each of these variables was correlated with each other and with the criterion--the preclinical grade average.

Findings and Conclusions: The Q or clerical perception subtest score had an r of .52 with the criterion, which was significant at the 1 percent level and which was found to be the best single predictor of preclinical grade average, followed by the verbal subtest score with an r of .41 and the general learning ability subtest score with an r of .36.

The educational level of the applicant was correlated .370 with the criterion. This coefficient was significant at the 1 percent level and, consequently, was included as a predictor variable in the regression equation.

The predictor variables, V score, Q score, and educational level, in combination had a multiple correlation coefficient of .60 with the criterion. From the multiple correlation team and obtained beta coefficients, a regression or prediction equation was derived: $X_1 = .135X_2 + .149X_3 + 1.30X_4 + 40.2$, where X_2 is the V score, X_3 the Q score, and X_4 the years of schooling of the applicant.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Harrison (Last name), Elton (First name), C. (Middle name)

Exact Title AN EVALUATION OF INDUSTRIAL EDUCATIONAL PROGRAMS IN SECONDARY SCHOOLS FOR NEGROES IN LOUISIANA.

Degree granted Ph. D., Date 1948, No. of pages in report 314

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To examine the industrial education programs in high schools for Negroes in Louisiana to ascertain objectives and goals, effectiveness of the instruction and adequacy of facilities.

Source of data and method of study:

The development of a philosophy of education, formulation of criteria, a survey of twenty-one Louisiana programs, observation of nineteen programs and interviews with principals and teachers to gain information on philosophy and objectives.

Findings and Conclusions:

The individuals responsible for planning the industrial education programs for Negroes in Louisiana need to re-think and re-examine their concepts of industrial education; to evaluate the existing programs; to develop better qualified teachers and to develop a spirit of group planning. A college study group of representatives of teacher education programs should give attention to the evaluation of local programs and teacher education programs. Local study groups should be created to study critically their respective industrial education programs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Harrison, Jr. (Last name), Paul (First name), E. (Middle name)

Exact Title PROBLEMS OF BEGINNING INDUSTRIAL ARTS TEACHERS.

Degree granted Ph.D., Date 1955, No. of pages in report 191

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To learn from beginning industrial arts teachers what they regarded as their primary professional difficulties.

Source of Data and Method of Study:

Data were secured by an instrument development to ascertain the professional problems of beginning industrial arts teachers.

Findings and Conclusions:

The data indicate that the areas of curriculum and instruction, the physical facilities available for teaching, and teacher-pupil relationships were the categories in which industrial arts teachers reported the greatest number of persistent problems. There was little variation in problem insight according to the teacher's scholastic achievement at the undergraduate level. The type of supervision afforded the beginning industrial arts teacher did not mitigate or change the level of importance of the problems confronted. There was little difference in the problem reports of teachers at the junior, junior-senior, or senior high school levels. General shop and unit shop teachers reported having the same or similar problems.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Harrison, Oval, Stanley
(Last name) (First name) (Middle name)

Exact Title THE DEVELOPMENT OF INDUSTRIAL EDUCATION IN MISSOURI.

Degree granted Ed. D., Date 1940, No. of pages in report 330

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Presents historical data concerning the development of industrial education in Missouri since the middle of the nineteenth century to 1940. A brief summary of the development of industrial education in the United States is included.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Haskell (Last name), Roger (First name), William (Middle name)

Exact Title EFFECT OF PERSONALITY CHARACTRRISTICS UPON LEARNING VIA SELECTED MODES OF INSTRUCTION: AN EXPERIMENTAL INVESTION.

Degree granted Ph. D., Date 1969, No. of pages in report 159

Granted by Purdue University (Name of Institution) Lafayette, Indiana (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate the relationship between selected personaligy variables and the academic performance of learners under two specific methods of instruction.

Source of Data and Method of Study:

Intact groups of high school students were subjected to one of two specific experimental treatment conditions: a programmed learning method of instruction, designated as the experimental treatment group (N = 78), or an instructor-led lecture-discussion method of instruction, designated as the comparison treatment group (N=67). One intact class (N = 18) was used as a control. An investigator-developed multiple choice type test covering the content of these presentations was used to measure learner outcomes. The Guilford-Zimmerman Temperament Survey was used to measure ten specific personality traits of individual subjects and the Wonderlic Personnel Test was used to assess the general mental ability of each subject. A researcher-developed questionnaire was used to assess the individual's perception of the learning method to which he was exposed.

Findings and Conclusions:

1. There was no statistically significant difference in the mean achievement test scores of groups of subjects who received programmed or conventional instruction
2. There were statistically significant differences in the mean achievement test scores among groups of subjects categorized as low, medium and high on the Restraint (p .001), Emotional Stability (.001, and Masculinity (.05) scales.
3. There were statistically significant interactions between instructional method and levels of subject categorized as low, medium, and high on the General Activity (.05) and Friendliness (.05 personality variables.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hastings (Last name), James (First name), Robert (Middle name)

Exact Title AN IN-SERVICE EDUCATION PROGRAM FOR TEACHERS OF INDUSTRIAL ARTS IN NEW YORK STATE.

Degree granted Ed.D., Date 1953, No. of pages in report 214

Granted by New York University (Name of institution) New York, New York (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To identify needs for in-service education industrial arts teachers in the State of New York and to make recommendations for meeting these needs through programs involving the services of such existing agencies as the public and private teacher training institutions of the state and the State Education Department.

Source of Data and Method of Study:

Data were gathered using normative survey type of research. It included 1298 industrial arts teachers, 42 supervisors, and 50 high school principals.

Findings and Conclusions:

Industrial arts teachers in general have been active in their in-service growth. Teachers have access to some well developed institutional programs of on-campus study. The in-service educational needs of the teachers were classified and were indicated according to their frequency of preference. There is a considerable need for more off-campus offerings by institutions concerned with the in-service growth of industrial arts teachers of the state.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hauenstein, Albert, Dean
(Last name) (First name) (Middle name)

Exact Title CONSTRUCTION: A TAXONOMY AND SYLLABUS OF PRODUCTION PRACTICES WITH IMPLICATIONS FOR INDUSTRIAL ARTS

Degree granted Ph. D. Date 1966 No. of Pages in Report 226

Granted by The Ohio State University Columbus, Ohio
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

In conjunction with the Industrial Arts Curriculum Project, the purpose was to develop a taxonomy of construction practices man uses to change the form of materials on a site, and to develop a model syllabus exemplifying the construction of any structure.

Source of Data and Method of Study:

The taxonomy was generated by researching, conceptualizing, and structuring construction practices into a hiearchy under the headings; pre-processing, processing, and post processing. The model syllabus was developed by analyzing, synthesizing, and structuring construction practices and processes which apply to the construction of any structure. The taxonomy and syllabus were validated by a panel of constructic experts.

Findings and Conclusi[illegible]

The following are the major divisions of the taxonomy:
1. Pre-processing: worker control--locating, controlling, positioning, and material handling.
2. Processing: separating, forming, and combining.
3. Post-processing: repairing; altering; installing; maintaining.

The following are the major divisions of the syllabus titles:
1. Prepare the Site: Clearing the site; setting,up temporary facilities, surveying for construction; earthworking
2. Building the Structure: setting foundations, building the major structural elements; installing circulatory systems, finishing the structure.
3. Completing the Site: landscaping; removing temporary facilities.
4. Post-Processing: repairing, altering, installing, maintaining the structures

Sample instructional materials were developed from the taxonomy and syllabus to serve as a guide in developing a junior high text, workbook, laboratory manual, achievement tests, teacher's guide, laboratory activities, and teacher's bibliography.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hauer (Last name), Nelson (First name), A. (Middle name)

Exact Title COMPARATIVE ANALYSIS OF CURRICULUM PATTERNS IN THE NEW YORK STATE INSTITUTES OF APPLIED ARTS AND SCIENCES.

Degree granted Ph. D., Date 1949, No. of pages in report 331

Granted by Cornell University (Name of institution) Itaca, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine whether there was any particular design or patterning in the organization of the curricula of the New York State Institutes of Applied Arts and Sciences with respect to 10 factors.

Source of data and method of study:

Institute bulletins, pamphlets, and research studies were reviewed. Personal visits to several institutes and interviews with institute directors were made.

Findings and Conclusions:

The following qualifications were stated: Vocational technical education should conform to the needs of people and the necessities of industry; provision for elective courses should be included in every curriculum; a curriculum properly conceived should provide for individual differences. On the basis of the above qualifications recommendations were made covering: Length of curricula, general and technical courses, elective or optional courses, classroom and laboratory periods, one-term courses, number of courses per curriculum, work-study load, and unit credits.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hawkins (Last name), Leslie (First name), V. (Middle name)

Exact Title AN ANALYSIS OF THE CONTRIBUTIONS OF INDUSTRIAL ARTS TO THE GENERAL EDUCATION OF ALL COLLEGE STUDENTS.

Degree granted Ed.D., Date 1953, No. of pages in report 257

Granted by The Pennsylvania State University (Name of institution) University Park, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To secure the opinions of college students, college graduates, and personnel in higher education and to obtain their suggestions on some of the needs of college students in the areas of handicrafts, consumer knowledge, and handyman activities.

Source of Data and Method of Study:

Data were secured by three questionnaires sent to college students, college graduates, and personnell of higher education. A study was made of the various phases of handicrafts, consumer knowledge, and handyman activities.

Findings and Conclusions:

College women and women graduates, although lacking in experience at home and in secondary schools, have high interest in some areas of shop activities. Little agreement existed on the type of crafts or hobbies that should be offered in colleges, but the majority agreed that individuals should have a creative hobby. A range of 84 to 98 per cent of the three groups surveyed recommended that colleges provide a workshop which would be available to all students regardless of curriculums. Judging the merits of common industrial products found in the home or office, in consumer knowledge showed the best prospect of being general education. The area of handyman activities as a whole did not have as much appeal for sutdents as did consumer knowledge, with the exception of some individual areas. Women graduates were as interested in handyman activities as in consumer knowledge. In all but a few items, interests and recommendations were far greater than the expereince of the three groups surveyed.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE -- NAITTE - AIAA

Author Hawlk (Last name), Robert (First name), Henry (Middle name)

Exact Title A Comparative Study of Estimated Achievement by Industrial Arts Students and Students of Cooperative Work Experience Selected from the Public Secondary Schools of Pennsylvania, Ohio, and Michigan.

Degree Granted Ed. D. Date 1960 No. pages in report 204

Granted By The Pennsylvania State University (Name of Institution) University Park, Penn. (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To determine and compare the estimated degree of attainment of validated industrial arts objectives by selected students of industrial arts, and selected students of cooperative work experience programs.

Source of Data and Method of Research: Data were secured by use of personal interviews and questionnaires. Interpretations were made from statistical computations that included comparisons of averages, significant differences of means, and high estimated levels of achievement.

Findings and Conclusions: Students of cooperative work experience achieved at a higher estimated level than students of industrial arts in regard to six of the nine validated industrial arts objectives. Industrial arts students achieved at a higher estimated level than students of cooperative work experience regarding two validated industrial arts objectives. Approximately equal estimated achievement was recorded for both compared groups of students in regard to one validated industrial arts objective.

The techniques of cooperative work experience could be suggested for adaptation by industrial arts instructors if an adjunct for the industrial arts curriculum is indicated as feasible and desirable for each respective school and community.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Haws (Last name), Robert (First name), Washington (Middle name)

Exact Title THE EMERGING ROLE OF INDUSTRIAL ARTS IN THE EXPERIENCE CURRICULUM OF THE ELEMENTARY SCHOOL.

Degree granted Ph. D., Date 1947, No. of pages in report 205

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available· Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine what use former elementary education students are making of industrial arts experiences, to find the problems and analyze them and offer a tentative solution.

Source of Data and Method of Study:

The data were obtained by a questionnaire sent to the graduates of the elementary-education curriculum who had received their degree between June, 1943 and August, 1946.

Findings and Conclusions:

The majority of the group studied have sufficient skills and understanding in industrial arts to carry on an effective program. There are hindrances of time, space, materials, tools, and equipment. A sympathetic administration can help remove obstacles which block a program. Visual aids were not used sufficiently. The use of trips to industry was not employed enough.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hawse, , John , Edward
(Last name) (First name) (Middle name)

Exact Title AN ANALYSIS OF INDUSTRIAL ARTS OBJECTIVES AS DETERMINED BY OPINIONS OF SELECTED POPULATION GROUPS.

Degree granted Ed.D. , Date 1964 , No. of pages in report 153

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To identify those population groups which are vitally interested in the education of our youth and to ascertain from them through the use of an opinionaire, how much and where emphasis should be placed. These groups were industrial arts teacher educators in Illinois; industrial arts teachers, administrators, industrial employment officers, and parents from Lake County, Illinois.

Source of Data and Method of Study:

The instrument used in this study was an opinionaire that was developed with the aid of a jury. The jury consisted of thirty-three industrial arts doctoral students, from sixteen different states, who were enrolled in school during the summer of 1963. The instrument consisted of six descriptive statements for each of the nine AVA objectives for a total of fifty-four descriptive statements. Each statement described a characteristic that might be possessed by a boy upon graduation from high school. The respondent was asked to decide how important this characteristic should be and to check the appropriate rating column that expressed his opinion.

Findings and Conclusions:

In analyzing the data it was found that there was much agreement in opinion among the five population groups in this study. All five population groups rated objective 2 (Appreciation and Use) as "desirable." All five population groups rated as "very important" the following five objectives: objective 3 (Self-realization and Initiative); objective 4 (Cooperative Attitudes); objective 5 (Health and Safety); objective 6 (Interest in Achievement); and objective 7 (Orderly Performance).

Four of the five population groups agreed on the ratings of the other three objectives. Objective 1 (Interest in Industry) was rated "desirable" by four population groups and the industrial arts teacher educators rated it as "very important." Objective 8 (Drawing and Design) and objective 9 (Shop Skills and Knowledge) were both rated "very important" by industrial arts teachers but only "desirable" by the other four population groups.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACJATE - AIAA - NAITTE

Author Hearn, (Last name), Arthur (First name), Robert Gordon (Middle name)

Exact Title THE TRAINING OF DISCUSSION GROUPS; AN EXPERIMENTAL STUDY.

Degree granted Ph. D., Date 1948, No. of pages in report 389

Granted by Massachusetts Institute of Technology (Name of institution) Cambridge, Massachusetts (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Heath (Last name), James (First name), Larry (Middle name)

Exact Title AN ANALYSIS OF THE COSTS OF SELECTED INDUSTRIAL ARTS PROGRAMS IN SAN DIEGO COUNTY.

Degree granted Ed. D., Date 1967 No. of pages in report 136

Granted by University of California, Los Angeles (Name of institution) Los Angeles, California (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

This study was designed to determine the costs of selected industrial arts programs in San Diego County.

Source of Data and Method of Study:

The problem was divided into four major parts for analysis. These were: (1) the determination of total costs; (2) the comparison of industrial arts costs with the regular school costs; (3) the comparison of ;the costs of each subject area within the programs; and (4) the determination of the relatiave significance of the variables that contributed to the costs of the industrial arts programs.

Findings and Conclusions:

Hyptheses held for the examination were that industrial arts costs were greater than the regular school costs, that there was a significant correlation between class size and the costs of I.A. classes, and that the costs of I.A. could be predicted from certain independent variables.

1. I.A. classes were found to cost more than the regular school program. The mean excess cost was 27.1 per cent.
2. Mean excess costs by subject were 22% for woodshop, 31% for metals, 16% for drawing, 43% for automotive, 20% for electricity, 29% for graphic arts, and 20% for general shop classes.
3. Correlation between industrial arts excess costs and mean class size was negative and significant at the five percent level of confidence for all subjects except metalshop and graphic arts.
4. Cost of the ;industrial arts classes were predictable by considering the number of periods (A), the student contact hours for the class(B), instructional supply costs (C), and the teachers' salary (D) in the formula: $\text{I.A. costs} = 95 + 5.0\,A - .9\,B + .02C \quad .01D$
5. The predicted costs had standard errors of 5.7 for woodshop, 10.2 for metalshop 4.4 for drawing, 15.1 for automotive, 6.5 for graphic arts, and 16.8 for general shop classes. The mean cost of the classes was $109.38 per student contact hour per year.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Heep (Last name), Richard (First name), H. (Middle name)

Exact Title THE CIVILIAN CONVERSATION CORPS; A NEW KIND OF EDUCATIONAL AND VOCATIONAL TRAINING.

Degree granted Ph. D. Date 1939 No. of pages in report 489

Granted by Fordham University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The problem of this dissertation was threefold: to determine what educational and vocational opportunities are presented to enrollees in the Civilian Conservation Corps; to discover elements of newness in these offerings; to indicate which of these elements may be of significance to secondary schools.

Source of data and method of study:

Findings were based upon a study of the educational programs for 3,803 enrollees in 23 Civilian Conservation Corps camps of New England in July, 1937; and for 3,363 boys in November, 1936. Data were secured by a study of the literature in the field by means of interview sheets, monthly camp educational reports, camp rosters, weekly lesson plans and programs, and by actual observation and participation in the Civilian Conservation Corps educational and vocational offerings of the various camps.

Findings and Conclusions:

The Civilian Conservation Corps has in it many elements of significance to secondary schools, such as: an enrollee-centered curriculum built on genuine motives, a curriculum which includes all activities in a boy's life, continuous counseling and guidance, voluntary participation in all activities, recognition of individual differences, an apprenticeship program offering immediate values. The Civilian Conservation Corps restores the connection between the academic and the practical between learning and doing, which were lost in the formulation of the educational process. The Civilian Conservation Corps is an enforced addition to the educational system of this country. It helps to bridge the gap between the school and the job by offering a program of practical training for immediate work. The camp program has many suggestions for adult education in that it shows what young adults want to study after they leave school, and what methods are used to hold their interest. The educational program in the camps represents a form of activity movement, but differs from such movements in its approach to an understanding of the true nature and relationship of man, society, and authority.

334

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Heggen (Last name), James (First name), R. (Middle name)

Exact Title A STUDY OF APTITUDES AND ACHIEVEMENT OF STUDENTS CONFINED AT THE UTAH STATE INDUSTRIAL SCHOOL FOR THE PURPOSE OF DETERMINING OCCUPATIONAL APTITUDE PATTERN TO BE USED AS GUIDELINES FOR FORMULATING A VOCATIONAL EDUCATION CURRICULUM.

Degree granted Ed. D., Date 1967, No. of pages in report 109

Granted by Utah State University (Name of Institution) Logan, Utah (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. (x)

Purpose of Study

Aptitude and achievement data of students detained at the Utah State Industrial School were studies in order to establish occupational aptitude patterns to serve as guidelines in the formation of a vocational educational curriculum at the institution.

Source of Data and Method of Study:

Data was compiled from test scores on the students in files at the State Industrial School.

Findings and Conclusions:

Based on scores attained on the California Achievement test, the total group sample was found to be retarded 3.7 years in achievement level, compared to norms established by this instrument. Based on the scores attained on the General Aptitude Test Battery, the total group sample was found to be significantly below the norms established by this instrument in aptitudes relating to intelligence, verbal, numerical, and clerical perception, and above average norms in manual dexterity and form perception.

Occupational aptitude patterns were established from the General Aptitude Test Battery and it was determined that 60 percent of the student sample group could qualify for seven of these occupational aptitude patterns.

Based on established occupational aptitude patterns and other extenuating factors, the type of vocational education curriculum which was suggested for the Utah State Industrial School was a general vocational curriculum with stress on vocational guidance and a well defined work experience program.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hejkal (Last name), Otto (First name), Charles (Middle name)

Exact Title LIFE AND WORK OF ROBERT W. SELVIDGE.

Degree granted Ed. D., Date 1950, No. of pages in report 396

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To trace the life of Robert W. Selvidge and his contributions and influence on industrial education in America.

Source of data and method of study:

A study was made of pertinent industrial education periodicals, minutes and proceedings of committees and organizations, and of Professor Selvidge's letters and writings. Interviews were held and letters or an information form were sent to professional and business organizations, friends, associates, and former students.

Findings and Conclusions:

Robert W. Selvidge as a teacher had the ability to inspire, encourage, and to challenge his students as few men can. He especially emphasized student participation in problem solving and job planning as important aspects of learning. He was a leader and active participant in most local, regional and national organizations promoting industrial education. In these organization meetings, and in his many books, magazine articles, and speeches he presented his philosophy of industrial education, his techniques of analysis, his methods of selecting and organizing subject matter, his individual instruction sheets, and his seven-step plan for teaching industrial arts and vocational industrial subjects. These ideas, policies and techniques have influenced the teaching of industrial education throughout the nation, and their evidence is apparent in current publications and school practice.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Helton (Last name), H. (First name), L. (Middle name)

Exact Title EVALUATION IN INDUSTRIAL ARTS TEACHER EDUCATION.

Degree granted Ed. D., Date 1958, No. of pages in report 280

Granted by Wayne State University (Name of institution) Detroit, Michigan (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To develop an evaluation instrument consisting of standards and criteria for the accreditation of undergraduate industrial arts teacher education programs.

Source of Data and Method of Study:

An opinionnaire sent to the departmental chairman of 202 institutions reported to have programs of industrial arts teacher education. Chairman were asked to rate characteristics of programs of industrial arts teacher education as essential, desirable, acceptable, undesirable, or detrimental. After the return of 82 percent of the opinionnaires, characteristics rated either essential or desirable by at least 75 percent of the respondents were selected, grouped, and written as tentative standards and criteria for efficient programs of industrial arts teacher education.

Findings and Conclusions:

The significant conclusions for this study are in the form of a 25-page evaluation instrument designed for self-study by individual departments and a 4-page supplement for industrial arts being published in April 1958 as the Seventh Yearbook of the American Council for Industrial Arts Teacher Education under the title, Accreditation in Industrial Arts Teacher Education.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hendrix, (Last name), Samuel (First name), David (Middle name)

Exact Title THE EDUCATIONAL VALUES OF THE NATIONAL YOUTH ADMINISTRATION WORK-PROGRAM IN TEXAS.

Degree granted Ed.D., Date 1942, No. of pages in report 179

Granted by University of Texas (Name of institution) Austin, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A critical examination of the NYA work projects in Texas, with implications for the public schools. Questionnaires were sent to 1702 NYA enrollees and supervisors and personal investigations were made of twenty-two NYA work-study projects in Texas.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hennig, James, Frederick
(Last name) (First name) (Middle name)

Exact Title AN EMPIRICALLY VALIDATED INSTRUCTIONAL PRODUCT FOR PRIVATE PILOT GROUND TRAINING: A DEVELOPMENTAL PROJECT

Degree granted Ph. D., Date 1970, No. of pages in report 491

Granted by Purdue University Lafayette, Indiana
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )
Interlibrary loan (x)

Purpose of Study:

To develop an instructional product that would prepare students to pass the Federal Aviation Administration Private Pilot Written Examination.

Source of Data and Method of Study:

The content required in a private pilot course was identified through an analysis of pertinent sources such as Federal Aviation Regulations, FAA written examination subject matter outlines, and FAA and commercial examination guides. Then the content identified in the first step was divided into logical content areas or instructional units. The third step involved the preparation of behavioral objectives for each topic within each of the instructional units. Literature and research in the areas of product development, programmed instruction, and instructional media development was then reviewed to establish a methodological base and to provide some basis for selection of instructional media for the product. Content and media were then related in the development of each of ten instructional units. The final step involved the preliminary validation of each of the instructional units.

Findings and Conclusions:

It was concluded that the instructional product was successful and, with minor modification, ready for introduction to commercial aviation training. It was recommended that the commercial version be coupled with a system for continuing systematic revision based on student performance.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Henry, George, F.
(Last name) (First name) (Middle name)

Exact Title TECHNIQUES FOR SELECTION AND GUIDANCE OF GRADUATE STUDENTS IN INDUSTRIAL ARTS EDUCATION.

Degree granted Ed.D., Date 1954, No. of pages in report 202

Granted by University of Florida Gainesville, Florida
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate practices used to determine the fitness of a student to pursue a graduate program, and to ascertain techniques of selection employed to locate the student in the program.

Source of data and method of study:

Data were secured from literature relating to admission practices and techniques for selection, analysis of graduate catalogs, and a questionnaire to graduate deans and directors of graduate study.

Findings and Conclusions:

A detailed list of techniques for selection and guidance of graduate students is suggested. It is recommended that more emphasis be placed on individualized selection in light of the conclusion that problems are individual in nature.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hepler (Last name), Earl (First name), R. (Middle name)

Exact Title ORDER OF PRESENTING ORTHOGRAPHIC PROJECTION AND PICTORIAL REPRESENTATION AND ITS EFFECT ON ACHIEVEMENT IN ENGINEERING DRAWING.

Degree granted Ed. D., Date 1957, No. of pages in report 205

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relative effectiveness or superiority of teaching orthographic projection first, followed by pictorial representation, as compared with teaching pictorial representation first, followed by orthographic projection.

Source of Data and Method of Study:

A comparison of six classes of engineering drawing which were divided into two equated groups. Groups were paired on Army General Classification Test scores, subject matter pretest scores, and secondary school drafting experience. Groups were compared on information achievement, drawing skill, ability to visualize, speed, and attitude of student toward subject.

Findings and Conclusions:

Findings indicate that teaching orthographic projection followed by pictorial representation is superior to, or a more effective approach in the development of informational achievement, drawing skill, and ability to visualize. There was no significant difference found between the two methods with respect to speed developed and attitude of student toward the course.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hess (Last name), Harry (First name), L. (Middle name)

Exact Title A COMPARISON OF THE EFFECTIVENESS OF TWO INSTRUCTIONAL PROCEDURES FOR DEVELOPING SAFETY ATTITUDES IN BEGINNING MACHINE WOODWORKING.

Degree granted Ed. D. Date May, 1969 No. of pages in report

Granted by Texas A&M University (Name of institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop and assess the effectiveness of closed loop single concept safety films accompanied by lectures with the lecture-demonstration method in developing safety attitudes within the beginning machine woodworking students.

Source of Data and Method of Study:

The investigation was conducted in Fort Worth, Texas, during the 1968-69 school year. Four industrial arts public secondary school teachers participated in the experiment. Each participating teacher instructed at least one experimental and one control class. A total of 150 male students participated in the research. Equivalent facilities were available in each school and treatments were randomly assigned. A randomized analysis of variance was utilized to evaluate the differences between (1) student developed safety attitudes within the control and experimental groups, (2) students' total initial learning and retention of safety theory within both groups, and (3) students' initial learning and retention of safety theory for each machine safety unit within both groups.

Findings and Conclusions:

1. Both the experimental and the control teaching procedures were equally effective in developing safety attitudes and initial learning and retention of total safety theory in beginning machine woodworking students.
2. Initial learning and retention of safety theory presented within the surfacer, wood lathe, circular saw, drill press, and jointer units was not developed significantly better in the experimental or the control groups.
3. Initial learning and retention of band saw safety theory was developed significantly better in the experimental group than in the control group.
4. Participating teachers indicated that the single concept films reduced their instruction time and they desired to continue utilizing the films as part of their safety program.
5. Both the experimental and the control teaching prodecures, rated by the participating teachers, were equally effective in developing students' safety attitudes.
6. Experimental group students enjoyed independently viewing the films.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Heyel (Last name), Clarence (First name), Leroy (Middle name)

Exact Title AN EXPERIMENTAL COMPARISON OF SELF-PACED AND GROUP-PACED AUTO-INSTRUCTION METHODS OF TEACHING A MANIPULATIVE SKILL AND RELATED COGNITIVE KNOWLEDGE IN INDUSTRIAL ARTS.

Degree granted Ed. D., Date 1967, No. of pages in report 222

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To provide applied research evidence regarding effectiveness of two method of pacing programed instruction in the teaching of information and motor skills to eighth-grade male subjects.

Findings and Conclusions:

1. Both the group-paced and individually-paced programs were equally effective with cognitive material at both ability levels.

2. No significant difference existed between methods of teaching manipulative tasks.

3. Self-paced material produced better performance for low ability students initially.

4. Students using group-paced methods learn faster

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Hickman, Keith, Frederick
(Last name) (First name) (Middle name)

Exact Title A Comparison of Methods with Film, Lecture, and Printed Instructional Materials for Teaching Graphic Science.

Degree granted Ed. D., Date Fall 1967 No. of pages in report 112

Granted by Colorado State College Greeley, Colorado.
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study: To determine which of three methods of instruction would yield the greatest amount of knowledge based upon a pre-test, post test, and retention test. To determine the comparative cost of each method used. To determine which method is most efficient in regard to time. To determine best method for graphic science courses.

Source of data and method of study: Data was collected from a pre-test, post test, and eight week retention test. Each exam form used the same questions but with the order changed. The difference between the pre-test and post test scores was regarded as the net gain in learning. The retention test followed instruction different from the lessons of the study. The Kruskal-Wall one way analysis of variance by ranks was used for the statistical treatment throughout the study and the results were reported at both the .05 and .10 levels of significance. A total of fifteen comparisons were made to determine if there were significant differences. Three methods were film, printed sheet, lecture.

Findings and Conclusions: Statistically significant differences were not determined among the three methods of instruction; therefore in terms of net learning and retention, the three methods appeared equally effective over the two semester study. Films and printed information sheets required less time for presentation to the students than the lectures. Because the methods appeared to be equally effective, the films and printed information sheets would be most efficient. In terms of cost, the lecture was most economical and the films were most expensive to produce of the methods.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE---ACIATE--AIAA - NAITTE

Author Hill (Last name), Charles (First name), Randall (Middle name)

Exact Title A STUDY OF THE STATUS AND NEED FOR INDUSTRIAL EDUCATION IN MISSOURI.

Degree granted Ed.D., Date 1950, No. of pages in report 241

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the status of industrial arts, diversified occupations, day-trade classes, industrial teacher education, the personnel in charge of these programs, and the need for an expanded program of industrial education in the public schools in Missouri.

Source of Data:

Data concerning the status of industrial education and the teachers of this work were obtained from records at the State Department of Education and by means of information forms. Data concerning the need for industrial education were obtained by sampling the opinions of school administrators, employers, parents, and high school graduates over the State.

Findings and Conclusions:

Recent high school graduates, parents, and employers are overwhelmingly in favor of the public schools providing industrial education. They believe, however, that the subject should be added to the present program rather than replacing existing subjects. These groups are more interested in diversified occupations and industrial arts than in day-trade classes. One hundred and sixteen industrial education programs will probably be added in the State during the 1950-52 school years. Eighty-six are to be industrial arts, 20 diversified occupations, and 2 day-trade classes. At least 93 additional industrial education teachers will probably be needed for the 1950-51 school year. Seventy-four will be required for industrial arts, 13 for diversified occupations, and 6 for day-trade classes. Approximately one-fourth of the industrial education teachers to be added during the 1950-52 school years are to be employed by reason of reorganized school districts, granting, of course, the unknown effect of the reclassification program.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hill, Frederick, William
(Last- name) (First name) (Middle name)

Exact Title A PLAN FOR THE ADMINISTRATION OF A PROGRAM OF OCCUPATIONAL ADJUSTMENT FOR THE YOUTH OF ROCKLAND COUNTY, NEW YORK.

Degree granted Ed.D. Date 1942 No. of pages in report 204

Granted by Columbia University New York, New York
(City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This study surveys and evaluates a county program of occupational adjustment which has been widely heralded as an example of the initiative which local communities may manifest in the solution of the problems of youth.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hill (Last name), James (First name), Levan (Middle name)

Exact Title A STUDY OF THE VARIOUS ASPECTS OF INDUSTRIAL ARTS AS INFLUENCED BY THE CHANGING CONDITIONS OF OUR AMERICAN CIVILIZATION FROM 1880 TO 1950.

Degree granted Ed. D., Date 1953, No. of pages in report 275

Granted by The Pennsylvania State University (Name of institution) University Park, Pa. (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To show the relationship between various changing aspects of the American culture, educational psychology, education, and industrial arts from 1880 to 1950.

Source of data and method of study:

Data were secured by the historical method of research.

Findings and Conclusions:

As industrial arts became a part of the curriculum of the public school, its purpose changed with the changing philosophy of education. Industrial arts content, method and organization have changed as a result of experimentation in the nature of the learner, and the learning powers. Industrial arts is continuously submitting its total program to critical examination and analysis. This is in the form of a critical evaluation of purpose; and an analysis of the purpose into specific contributions that industrial arts can make, behavior changes to be expected in youth, or educational outcomes to be achieved. All facets of society, educational philosophy and practice, and the nature of the learner and how he learns are contributing to this analysis.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hinckley (Last name), Edwin (First name), Carlyle (Middle name)

Exact Title AN EXPERIMENTAL STUDY: RELATIVE EFFECTIVENESS OF FOUR TECHNIQUES OF TEACHING WOOD IDENTIFICATION.

Degree granted Ed.D. Date 1963 No. of pages in report 95

Granted by Colorado State College (Name of institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

1. To determine which of the four techniques utilized in the study indicated the most efficient learning based on scores of a pre-test and a post-test.
2. To determine if the most efficient technique makes more efficient use of class time.
3. To make recommendations for a modified schedule based on the findings which would expand the capacity of the existing laboratories without enlarging the class size, or lengthening the instruction day or week.

Source of Data and Method of Study:

A wood identification unit was used for this study. The four instructional methods tested were designed to provide a series of four methods that progressed from the teacher-classroom centered instruction to the student oriented and initiated learning activity. Traditional method A was principally teacher-lecture, giving the students access to wood samples and prepared charts on which to record information from the lecture. Method B used completed wood characteristics charts and samples plus colored slides and some lecture. An automatic teaching device was used for method C, requiring student initiated study practice outside of class time and taking ten minutes for explanation of use of the machine. Method D utilized boxes of wood samples and blank indentification sheets to use in outside study-practice.

Findings and Conclusions:

No method tested proved to be statistically superior to another in learning efficiency. Method A, the traditional method, appears to be the least efficient because of the greater amount of class time needed.

348

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hiser (Last name), Paul (First name), T. (Middle name)

Exact Title THE DEVELOPMENT AND USE OF A PRE-STUDENT TEACHING EVALUATION PROCEDURE IN INDUSTRIAL ARTS TEACHER EDUCATION.

Degree granted Ed. D., Date 1958, No. of pages in report 443

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To present the development and application of personnel instruments and of evaluative procedures useful in a college program wherein industrial arts teachers are prepared.

Source of Data and Method of Study:

61 faculty judges rated 327 industrial arts majors over a 6-year period on 10 personal and professional factors from entry in college to student teaching experience, providing 1,886 ratings. Ratings and scholastic indices were correlated with the criterion of their student teaching success. An accumulative record was developed and utilized for summarizing these ratings and other personal data.

Findings and Conclusions:

The rating instrument employed had the required reliability. The relation of personal and professional factors to criterion of student teaching success, of scholastic indices to the criterion, and of personal and professional factors to scholastic indices, were all significant at the 0.001 level. As single predictors at the pre-student teaching level both the ratings and the scholastic indices appeared to have substantial value for selection and evaluation procedures at Oswego. The combined value of the ratings and the indices of scholarship was a stronger predictor than either one alone. The development and use of a cumulative record proved to be useful to both students and faculty.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hoerner (Last name), James (First name), Leroy (Middle name)

Exact Title: AN ASSESSMENT OF MICRO-TEACHING AS A MEANS FOR IMPROVING THE EFFECTIVENES OF THE PRE-SERVICE TRADE AND INDUSTRIAL TEACHER EDUCATION WORKSHOP.

Degree granted Ph. D. Date 1969 No. of Pages in Report ______

Granted by Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate ways of improving the efficacy of the pre-service trade and industrial education workshop teaching practice sessions through the application of micro-teaching and video recording techniques.

Source of Data and Method of Study:

Forty-eight participants were randomly assigned to eight treatments which consisted of combinations of the two levels of three major variables: (1) video feedback or no video feedback; (2) teaching two, ten-minute lessons or four, five-minute lessons; and, (3) teaching peers or high school students in the teaching practice sessions of the workshop. Four instruments were used to collect data for the study--a teaching performance measurement, a confidence level measurement, and two attitude measurements, one immeduately following the practice teaching sessions and one after the participants had taught eight months.

Findings and Conclusions:

1. No significant differences were found in teaching performance between: those who had video feedback and those who did not; those who taught four, five-minute lessons and those who taught two, ten-minute lessons, and; those who taught students and those who taught peers.
2. No significant difference in gain in confidence between those who taught students and those who taught peers.
3. While there were no significant statistical differences found between the treatment groups, the attitude scales revealed strong support for the application of micro-teaching and video recording.
4. The investigator concluded and recommended that video feedback; four, five-minute lessons; and involvement of students of the appropriate age level in micro-teaching sessions be applied in the pre-service workshop.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hollinshead, Merrill, T.
(Last name) (First name) (Middle name)

Exact Title THE PREDICTION OF MECHANICAL ABILITY IN OLDER MENTALLY RETARDED BOYS.

Degree granted Ph.D., Date 1952, No. of pages in report 119

Granted by New York University New York, New York
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain what commercially available tests of mechanical ability, used singly or in combination, will yield the most satisfactory indication or performance of a mechanical nature with older mentally retarded boys.

Source of Data and Method of Study:

Eighty-four mentally retarded boys, ages 12 to 16, with Binet IQ's falling between 55 and 79 were asked to make (from a model) without help a woodwork object; to complete the project, common shop tools were used. On the basis of teachers' judgments, the completed objects were rated on a pass-fail basis, and became the criterion of mechanical performance. Against this criterion, scores of the subjects on a variety of tests were equated. Intercorrelations among the variables were computed, and the best possible battery of measures which predicted the criterion was determined.

Findings and Conclusions:

Biserial correlations between the criterion and six separate measures of mechanical ability ranged from .38 (Pennsylvania Bi-Manual Assembly) to .70 (Revised Minnesota Paper From Board). By the use of multiple regression equation techniques, the best combination of measures for the prediction of the criterion resulted in the following; revised Paper Form Board, Stenquist Assembly, C.A., and Binet IQ provided the maximum multiple correlation of .8169. Individual measures of mechanical ability, used singly, and particularly when combined with the predictive strength of other variables, yield substantial predictions of mechanical performance in older mentally retarded boys.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Holmen (Last name)	Holger (First name)	Emanuel (Middle name)

Exact Title PROFESSIONAL PROBLEMS OF TRADE AND TECHNICAL TEACHERS IN THE FIFTEEN AREA POST-SECONDARY SCHOOLS OF IOWA WITH IMPLICATIONS FOR IN-SERVICE TEACHER EDUCATION.

Degree granted ______ Date ______ No. of pages in report ______

Granted by University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. To ascertain the professional problems encountered by teachers of trade and technical education in the fifteen area post-secondary schools of Iowa as expressed by the teachers themselves and their immediate supervisors.
2. To solicit opinions from these two sources as the probable causes or sources of these professional problems.
3. To point out the implications of the findings for a program of teacher education for these teachers.

Source of Data and Method of Study:

Data for the study were secured through personal interviews with a 50 percent random sample of the teachers from each area school who were not professional teachers and their immediate supervisors. One hundred and three teachers and 26 supervisors were interviewed.

Findings and Conclusions:

1. Trade and technical teachers appear to be aware of the fact that being a skilled tradesman or technician does not automatically make them a teacher.
2. Trade and technical teachers tend to encounter many problems, the nature and scope of which are quite varied.
3. Some of these problems are of such a nature that they can not be resolved through in-service teacher education programs on the state or local level; others appear to be such that they apparently could be easily solved; and still others are extremely involved and complicated, requiring action on the local, state, and national levels. Some of the problems appear to be those often found in connection with new, emerging programs and, with the passing of time and additional experience, should diminish in importance.
4. The present in-service program apparently is not fully meeting the needs of the teachers. A major need is for training prior to entering the classroom as a teacher.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDSUTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Holtrop (Last name), William (First name), F. (Middle name)

Exact Title THE DEVELOPMENT AND PRESENT STATUS OF VOCATIONAL EDUCATION IN THE NETHERLANDS.

Degree granted Ed.D., Date 1948, No. of pages in report 297

Granted by University of California at Los Angeles (Name of institution) Los Angeles, Calif. (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

This study reviews the Dutch state-supported program of vocational education on the elementary, secondary, and technical college level from the middle of the nineteenth century to the present. Topics such as the effects of the Act of Vocational Education, enrollment, women's technical education, apprenticeship training by industry, primary objectives of vocational education, and curriculum are discussed from information collected from primary sources in the Netherlands in 1939 and 1947.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hoots, Jr. (Last name), William (First name), Ransom (Middle name)

Exact Title GRAPHIC ARTS EDUCATION IN THE PUBLIC SCHOOLS OF NORTH CAROLINA, WITH IMPLICATIONS FOR TEACHER EDUCATION.

Degree granted Ph. D., Date 1966 No. of pages in report 197

Granted by The Ohio State University, (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine the adequacy and status of graphic arts education in the industrial arts programs of the state to discover what ought to be taught in such programs, and to determine the direction of growth expected for this area of the curriculum.

Source of Data and Method of Study:

A proposed set of criteria was evaluated by a jury of thirty-eight industrial arts and graphic arts leaders from throughout the United States, and a revised set was established and used to determine the adequacy of graphic arts education in North Carolina. A second comparatiave instrument consisted of status data collected from graphic arts programs in schools representing the other southeastern states of Florida, Georgia, and Virginia.

Findings and Conclusions:

1. Fewer than 15 percent of the industrial arts programs in North Carolina included graphic arts.
2. The graphic arts curriculum in North Carolina was very narrow in scope, lacked depth of subject matter, and did not measure up to either the criteria or status of schools representing other southeastern states.
3. Facilities for teaching graphic arts in North Carolina were very limited. While adequate space for non-laboratory activities was provided, equipment necessary for teaching a program reflective of current industrial practices was non-existent.
4. Teachers of graphic arts in North Carolina were well prepared academically, but 20 percent had no preparation in graphic arts.
5. The two major reasons for not including graphic arts in the industrial arts programs were the expense of equipment and the unavailability of qualified teachers.
6. Forty-five schools in N rth Carolina had plans for adding graphic arts to their industrial arts program.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - NAITTE - AIAA

Author Hoover (Last name), Roger (First name), Lee (Middle name)

Exact Title A Comparison of Metal Working Processes Practiced By Contemporary Industry With Those Taught in Industrial Arts Teacher Education.

Degree granted Ed. D., Date Spring 1967 No. of pages in report 164

Granted by Colorado State College (Name of institution) Greeley, Colorado. (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. (x)

Purpose of Study: To determine the extent to which industrial arts teacher education institutions were including modern industrial processes in their metal working curricula for prospective industrial arts teachers.

Source of data and method of study: Obtained by using two survey instruments constructed of identical metalworking processes which were extracted from recent trade, industrial, engineering, and professional publications. One survey instrument was sent to 200 selected metalworking industries for rating of the processes, while the second survey instrument was sent to 195 industrial arts teacher preparation institutions for recognition of the processes included as instructional units. The comparison between the industrially rated processes and the processes included by the institutions as instructional units provided the information for the significant findings of this study.

Findings and Conclusions: Analysis showed that little parallelism existed between the utilization by industry of selected metalworking processes and the instructional units included in industrial arts teacher preparation institutions. Most of the instruction given on the more recent processes was taught by the lecture method of presentation. Few institutions offered opportunities for direct laboratory application by the students on the selected contemporary processes.

The responsibility of obtaining information on new media concerning industrial tools, materials and processes was indicated as resting with the individual instructor.

The largest number of quarter hours of credit offered in metalworking at any institutions participating in this study was 60.

Conclusions were the following: The objective of industrial arts which aims at giving an insight into and understanding of industry is only conditionally being met. No school taught all processes recognized by industry as being extensively used. The instructional programs of industrial arts teacher preparation institutions are not changing to reflect industrial innovations in metalworking. The present programs used by industrial arts metalworking professors to keep up-to-date are inadequate. Institutions need to make significant provisions in their industrial arts budget for investigation into and experimentation with new industrial processes.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Horbake (Last name), R. (First name), Lee (Middle name

Exact Title INDUSTRIAL ARTS IN THE ELEMENTARY SCHOOL.

Degree granted Ph. D. , Date 1942 , No. of pages in report 351

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An experimental approach to determine the teaching-learning possibilities of industrial arts at the elementary school level. Evaluation devices were developed and used to aid in the instruction and to provide a degree of appraisal.

Source of data and method of study:

Findings and Conclusions:

356

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Horine, John, William
(Last name) (First name) (Middle name)

Exact Title RELATION OF EXPERIENCE IN HIGH SCHOOL DRAFTING TO ACHIEVEMENT IN ENGINEERING DRAWING AT THE COLLEGE LEVEL.

Degree granted b Ed. D., Date 1961, No. of pages in report 159

Granted by University of Missouri, Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relation of experience in high school drafting to each of the following factors of achievement in college engineering drawing: drafting skill development, informational achievement, visualizing ability, attitude toward college drafting, and final grades.

Source of Data and Method of Study:

Data for the study were secured from engineering drawing teachers and students from six Missouri colleges, and from records on file with the Missouri Statewide Testing Service. Students were divided into three groups: Those with no high school drafting, those with one or two semesters, and those with more than two semesters of high school drafting experience. The groups were then analyzed to determine the effect high school drafting had upon college engineering drawing.

Findings and Conclusions:

1. High ability students who take one year of drafting in high school are not as likely to take additional semesters of drafting as are lower ability students.
2. The more high school drafting experience the student has had, the more skillful he is likely to be in college drafting.
3. Little contribution is conveyed in high school drafting that is helpful in informational achievement tests in college drafting courses.
4. College engineering drawing students with experience in high school drafting are better able to visualize objects as they appear in orthographic projection than students without such experiecne.
5. Students who have had high school drafting earn higher grades in college level drafting than those students who have had none.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hornblake, R., Lee
(Last name) (First name) (Middle name)

Exact Title DUALISMS IN EDUCATION.

Degree granted Ph.D., Date 1939, No. of pages in report 351

Granted by Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To establish a basis for industrial arts in elementary school programs. The formulation and projection of an industrial arts program in an elementary school.

Source of Data and Method of Study:

The setting for several phases of this study was Campus Elementary School of the State Teachers College, Oswego, New York. A questionnaire was sent to officials of forty-five state departments of education to gather additional information.

Findings and Conclusions:

Industrial arts in elementary school provides children with opportunities to express themselves in tangible media, to develop wholesome personalities, to formulate understanding of social import, to think in planning and executing their tasks.

The major part of the industrial arts work should be related in some way to ongoing classroom enterprises. Also some time should be set aside for children to work on something they want in a laboratory situation.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Horowitz, (Last name), Irving (First name), Lewis (Middle name)

Exact Title THE METAL MACHINING TRADES IN PHILADELPHIA - AN OCCUPATIONAL SURVEY

Degree granted Ph.D., Date 1939, No. of pages in report 129

Granted by University of Pennsylvania (Name of institution) Philadelphia, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A survey of the metal working industries to determine the number and nature of wage earning occupations in Philadelphia which require some degree of machine shop training. Data were assembled between October 1936 and August 1937.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Horton (Last name), George (First name), Richard (Middle name)

Exact Title HISTORY OF THE OHIO INDUSTRIAL ARTS ASSOCIATION: AN ANALYSIS OF LEADERSHIP ELEMENTS AND FUNCTIONS.

Degree granted Ph. D., Date 1967 No. of pages in report

Granted by The Ohio State University (Name of institution); Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The following questions framed the basic problem of establishing a permanent record of the Ohio Industrial Arts Association from 1933 to 1966. Why was the association founded? What is the nature of its growth? What evidence testifies to its leadership?

Source of Data and Method of Study:

Data were gathered from archives of the association, observers, and outside (including library) sources. An opinionnaire was sent to a jury of twenty leaders' of the Assn. A preliminary instrument mailed to thirty-seven observers and association participants identified the sources of data. Evidence included minutes, special reports, correspondence, journals, programs, constitutions, and News Letters.

Findings and Conclusions:

Concluding recommendations dealt with:
1. Establishment of a permanent state level advisory committee.
2. Establishment of a committee on resolutions.
3. Investigation of decentralizing the convention location.
4. Establishment of a legislation committee.
5. Study of a concerted recruitment program.
6. Review of frequency and nature of Executive Committee meetings.
7. Use of convention committees with greater authority.
8. Establishment of a long term membership chairman.
9. Periodic revision of a manual for association leadership.
10. Consideration of change in regard to composition of the Executive Committee.
11. Reassessment of the school exhibits program.
12. Systematized storage of archives.
13. Study of association publications.

The purpose of tracing the Ohio Industrial Arts Association was accomplished. The lineage of the association had never been recorded. While the present association is different from the state organization of thirty years ago, the story is one of normal evolution.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hosler (Last name), Fred (First name), W. (Middle name)

Exact Title THE ADMINISTRATIVE ORGANIZATION FOR THE APPRENTICESHIP LEADERSHIP PROGRAM IN THE PANAMA CANAL ZONE.

Degree granted Ed.D., Date 1938, No. of pages in report 180

Granted by Teachers College, Columbia University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The study deals with the background and setting up of an apprenticeship and learnership program in the Panama Canal Zone, the need for the training program, changes in the secondary school curriculum which were necessary in order that the schools could serve the Zone better, the organization and administration of the apprentice-learner school, and recommendations for the future.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Hostetler (last name), Ivan (first name), (middle name)

Exact Title AN ANALYSIS OF OPINIONS ON INDUSTRIAL EDUCATION WITH THEIR INDICATIONS FOR A PROGRAM IN THE PUBLIC SCHOOLS.

Degree granted Ed.D., Date 1945 No. or pages in report 226

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of study:

A study concerning the views of labor, management, and educators toward fifty issues involved in planning and operating programs of industrial education in the public schools.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hubbard, Louis, Herman
(Last name) (First name) (Middle name)

Exact Title THE PLACE OF VOCATIONAL TRAINING AS AN OBJECTIVE OF THE WOMAN'S COLLEGE.

Degree granted Doctors, Date 1930, No. of pages in report ____

Granted by University of Texas Austin, Texas

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hughes (Last name), Wayne (First name), Philo (Middle name)

Exact Title SAFETY PROCEDURES IN THE SCHOOL SHOP.

Degree granted Ed. D., Date 1942, No. of pages in report 396

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An analysis of the investigations on safety conditions and practices in the industrial arts and vocational shops since 1925 in nearly every state and from a variety of types and sizes of towns.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hukill (Last name), Viron (First name), Nelson (Middle name)

Exact Title THE DO-IT-YOURSELF MOVEMENT IN PULASKI COUNTY, ARKANSAS, AND ITS IMPLICATIONS FOR INDUSTRIAL ARTS.

Degree granted Ed. D., Date 1958, No. of pages in report 123

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the scope and extent and the motiviating factors of the do-it-yourself movement in Pulaski County, Arkansas, in the areas of home maintenance, repair, alteration, and construction, and to point out their implications for industrial arts.

Source of Data and Method of Study:

Screening double postal cards were sent to 2,000 persons whose names were obtained by taking each consecutive 26th male name and address from the Pulaski County 1956 numerical listing of passenger car registrations. Data for the study were obtained from 201 information forms received from 256 persons qualifying as "do-it-yourselfers."

Findings and Conclusions:

Active participation in do-it-yourself work is most common in the age group 30-49, and a large percent of the participants are from the three upper occupational groups. Most of them have sufficient hand tools with which to perform their jobs and may have at least two pieces of power equipment, one of which is likely to be an electric hand drill. They are motivated primarily by economic and psychological reasons and are saving a considerable amount of money doing jobs themselves. Most jobs are being performed in the areas of painting, papering, and finishing, electrical work, and carpentry, and the greatest difficulties are being encountered in plumbing and concrete, plaster, and masonry jobs. A majority of do-it-yourself jobs are performed by people working alone who have recieved practically no help in learning how to do them, other than what they have just picked up. They are desirous of instruction in these activities and think it should be offered in the public schools of their community.

365

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION

Author Humbert, John, Joseph , III
(Last name) (First name) (Middle name)

Exact Title SELECTED FACTORS AFFECTING ATTITUDES OF SCHOOL ADMINISTRATORS AND SCHOOL BOARD PRESIDENTS TOWARD INDUSTRIAL ARTS IN SMALL SCHOOLS.

Degree granted Ed. D. ,Date 1967 ,No. of pages in report

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine which selected factors affect administration and school board president's thoughts and actions towards industrial arts.

Source of Data and Method of Study:

A stratified random sample of two hundred schools having a daily attendance of 1500 or less was selected. A personal data sheet and Likert Attitude Scale was sent to the chief administrator and school board president of each school making a total of 400 subjects surveyed. Of the total number surveyed about 56% (225) administrators and school board presidents responded.

Findings and Conclusions:

The findings of the study tended to support the conclusions that (a) administrators were more favorable to industrial arts than were school board presidents (b) administrators and school board presidents who worked with industrial arts programs had a more positive attitude towards industrial arts than administrative personnel from schools which had no industrial arts programs, and (c) factors such as socioeconomic background, education and age were not related to either the administrator's or the school board president's attitudes towards industrial arts.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Humble, Milford, Keith
(Last name) (First name) (Middle name)

Exact Title PRACTICES AND PROVISIONS FOR PROTECTING PUPILS IN SCHOOL SHOPS.

Degree granted Ph. D., Date 1937, No. of pages in report 175

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An investigation of safety practices, safety provisions, and protection afforded pupils in school shops in the United States. Topics included are methods for safeguarding mechanical and physical equipment, safety practices for the prevention of accidents, and financial protection afforded injured pupils.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMAIRES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Hunt, DeWitt, Talmadge
(Last name) (First name) (Middle name)

Exact Title SHOPWORK IN ENGINEERING DIVISIONS OF STATE UNIVERSITIES AND LAND GRANT COLLEGES.

Degree granted Ph.D., Date 1939, No. of pages in report 411

Granted by Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of study:

An investigation of shopwork insturction including courses offered for non-engineering as well as engineering students from 1824--1939. Proposals for changes and additions to their curricula are included.

Source of data and method of study:

The first part of the study was a historical review of the development of shopwork in the divisions of engineering in State Universities and land grant colleges. Sixty universities offering shopwork in engineering were included in this normative survey. College catalogs and two questionnaires were used in data gathering.

Findings and Conclusions:

Shop work in engineering is becoming less important; from 15.4 semesters born in 1885 to 6.3 hours in 1939. Industrial arts education curricula leading to degrees are administered by engineering shopwork departments in four of the sixty schools. Nineteen industrial arts education curricula are to be found in the sixty schools. Many engineering shopwork courses are required in these curricula. There is a distinct trend toward a regrouping of shopwork courses in functional areas rather than in unit courses.

368

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Huntington, Harold, A.
(Last name) (First name (Middle name)

Exact Title INDUSTRIAL VOCATIONAL TEACHER EDUCATION.

Degree granted Ph.D., Date 1940, No. of pages in report 326

Granted by Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An investigation of the policies affecting industrial vocational teacher education programs. It includes a description of the attitudes of national agencies and organizations toward these programs with emphasis on the attitudes of leaders in the field concerning the programs in effect from 1937 to 1942.

Source of Data and Methods of Study:

The investigation included programs described by the federal government and in twenty-two available state plans. The survey of teacher education program included pre-service and in-service teacher education provided by institutions of higher learning and those provided by the state departments. Data were gathered by questionnaires. Criteria for evaluating programs were based on the statements of educational officials and authorities.

Findings and Conclusions:

The findings of this study show that limitation in the functions to be performed in industrial-vocational education arise out of the lack of adequate contacts between the educators in the program and those groups in society served by the program, as well as, in too limited concepts of the function of this program held by educators in the program.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Huss (Last name), William (First name), E. (Middle name)

Exact Title AN EVALUATION OF PROFESSIONAL DEVELOPMENT IN INDUSTRIAL ARTS STUDENT TEACHING THROUGH ISOLATION OF ABILITIES IN TEACHING ACTIVITIES AT STATE-WIDE COOPERATING SCHOOLS OF THE OSWEGO (N.Y.) STATE TEACHERS COLLEGE.

Degree granted Ed. D., Date 1951, No. of pages in report 326

Granted by The Pennsylvania State University (Name of institution) University Park, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To discover the professional and technical teaching abilities of student teachers through a program of evaluation and appraisal.

Source of Data and Method of Study:

The student teaching program conducted by the State University of New York's State Teachers College at Oswego was chosen as having adequate facilities to conduct an experimental search to determine the professional development that takes place during student teaching. A rating scale was devised on which the master teachers were asked to consider the five degrees of achievement in each of the abilities described in the first week and the last week as a means of appraising growth during the period of practice teaching.

Findings and Conclusions:

Student teachers showed average growth during practice teaching in the following areas of activity: (a) understanding and using industrial arts objectives, (b) using democratic practices in the shop, (c) developing self-assurance and a feeling of success in learners, (d) questioning and evaluation, and (e) managing a shop and personnel organization. A relatively small growth in the following areas was evident: (a) the ability to promote pupil thinking and planning, (b) the ability and zeal to use teaching aids, and (c) the ability to demonstrate competency in manipulative skills. The major activities which showed greatest improvement during practice teaching were those specifically related to methods in teaching.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Huxol (Last name), Robert (First name), Lyon (Middle name)

Exact Title THE RELATIONSHIP BETWEEN THE CONTEMPORARY PHILOSOPHY OF INDUSTRIAL ARTS EDUCATION AND CURRENT PRACTICE IN SELECTED INDIANA SCHOOLS.

Degree granted Ed.D., Date 1954, No. of pages in report 275

Granted by Indiana University (Name of institution) Bloomington, Indiana (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To reveal whether or not the philosophies of industrial arts, as presented by acknowledged leaders were consistent with the industrial arts practices existing in typical secondary school shops.

Source of Data and Method of Study:

Data were obtained by interviews.

Findings and Conclusions:

Administrators recognize the value of an adequate personnel policy, provide budgetary procedures relative to acquisition of supplies, keep the public informed relative to the school curricula, and encourage a professional attitude among the staff toward industrial arts. They have not yet accepted the idea that industrial arts courses may possess merit for both boys and girls. The practice of providing a written course of study is rather limited. In general, industrial arts shops appeared to be well-planned, adequately supervised, and properly maintained.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ilott (Last name), John (First name), Frederick David (Middle name)

Exact Title INDIVIDUAL PROJECT OR MASS PRODUCTION AN EXPERIMENTAL COMPARISON IN INDUSTRIAL ARTS.

Degree granted ______ Date ______ No. of pages in report ______

Granted by University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To compare the effectiveness of two laboratory instructional approaches, individual project and mass production, used to develop student understanding of industry in industrial arts. The research hypothesis under consideration in this study was: (1) knowledge of tools, (2) knowldege of operations, (3) knowledge of industrial organization, and (4) knowledge of materials of industry can be taught as effectivel in terms of student behavioral change, by the mass production instructional approach as by the individual project instructional approach.

Source of Data and Method of Study:

This field experiment involved four teachers and eight classes of grade eight metalwork students. The experimental factor varied for each of the two instructional groups was the approach to teaching selected content in industrial arts. The two approaches to instruction were: mass production, employing a student operated mass production project, where the students organized and ran a production line; and individual project, employing student made individual projects, where students worked only on their own project. The instructional content was related to tools, operations, industrial organization and materials. For statistical analysis the students were divided into high, middle, and low achievement groups on the basis of their scores on the Iowa Tests of Basic Skills.

Findings and Conclusions:

No significant differences were found between the instructional approach groups. Within each instructional approach some peculiarity in the pattern of scores on the criterion measures were observed. High and middle achievers as selected by their scores on the Iowa Tests of Basic Skills, appeared to do better than low achievers, but no difference was observed between high and low achievers. Within the individual project approach, low and middle achievers were indistinguishable and appeared to do less well than high achievers. The two instructional approaches, mass production and individual project were not differentially effective for teaching content related to: tools, operations, industrial organization, and materials.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ingram (Last name), Franklin (First name), Charles (Middle name)

Exact Title THE EFFECT OF ELEMENTARY SCHOOL INDUSTRIAL ARTS ON PUPILS' SOCIAL STUDIES ACHIEVEMENT.

Degree granted Ed.D, Date 1966, No. of pages in report 209

Granted by The Pennsylvania State University (Name of institution) University Park, Pennsylvania (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

This study sought to determine whether the introduction of elementary school industrial arts activities into regular social studies units in grades four through six, would have an effect on social studies unit concept learnings.

Source of Data and Method of Study:

Approximately 250 children in the Bald Eagle Joint School District, Centre County, Pennsylvania participated during the school year 1964-65. Each class participating studied two social studies units, one by usual methods, one incorporating elementary school industrial arts. All classes studied for the same length of time. The Iowa Every-Pupil Test of Basic Skills was used and a questionnaire was developed to gather student attitudes.

Findings and Conclusions:

1. The incorparation of elementary school industrial arts activities did not prevent, as measured by social studies unit concept tests, significant learning in social studies.
2. All experimental groups studying the social studies units incorporating elementary school industrial arts activities improved their silent reading comprehension and work study skills during the period of study although silent reading and work study skills were not a direct part of the units.
3. Students studying the social studies units incorporating industrial arts indicated that they "Learned a lot" and "Had lots of fun." There was a highly significant difference favoring the experimental unit incorporating I.A. activities.
4. This study indicated that learning can be fun, in the view of the learners, at no expense to achievement in unit concepts and in slent reading comprehension and work study skills when elementary school industrial arts activities are a part of the social studies unit.

373

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Irgang (Last name), Frank (First name), Jacob (Middle name)

Exact Title COMMUNITY FACTORS IN THE DETERMINATION OF THE INSTRUCTIONAL AREAS OF AN INDUSTRIAL ARTS PROGRAM.

Degree granted Ph. D., Date 1956, No. of pages in report 174

Granted by University of Michigan (Name of institution) Ann Arbor, Michigan (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To define the community factors that should be included in the criteria used to determine the instructional areas of an industrial arts program and to ascertain to what degree these factors are being used in the State of Michigan.

Source of Data and Method of Study:

An analysis of literature to compile a basic list of community factors, which were then submitted for rating to a jury of specialists in industrial education and to selected industrial arts instructors.

Findings and Conclusions:

The industrial arts instructors considered the community factors to be of greater importance in determining the instructional areas of an industrial arts program than did the jury of specialists. The community factors are being considered in an order of importance acceptable to the industrial arts instructors. In actual practice the significance of the community factors is not being considered to the degree desired by the industrial arts instructors.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS ED[illegible]TION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Irvine (Last name), Fleet (First name), Raymond (Middle name)

Exact Title A STUDY OF CREATIVE THINKING ABILITY AND ITS RELATIONSHIP TO PSYCHOMOTOR ABILITY, MECHANICAL REASONING ABILITY AND VOCATIONAL APTITUDE OF SELECTED HIGH SCHOOL INDUSTRIAL ARTS STUDENTS

Degree granted Ed. D, Date 1968 No. of pages in report 113

Granted by Utah State University (Name of institution) Logan, Utah (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Was to determine if there are any significant relationships between creative thinking ability and selected psychomotor abilities, vocational aptitude, mechanical reasoning ability and grades point average in industrial arts and to determine the implications these relationships have for affective industrial arts curriculum development

Source of Data and Method of Study:

A test battery including the Torrance Tests of Creative Thinking and the Differential Aptitude Mechanical Reasoning Test was administered to 177 high school seniors enrolled in their third year of industrial arts courses. Achievement in industrial arts courses was indicated by course grades found in students' cumulative records.

Findings and Conclusions:

It was concluded that creative thinking ability is a distinct ability, apart from psychomotor acitivity, vocational aptitude and mechanical reasoning ability. It was further concluded that current curriculums in industrial arts are geared toward the verbal dimensions of creative thinking ability rather than figural dimensions.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Iscn (Last name), Vernon (First name), Harold (Middle name)

Exact Title DESIGN:: CURRICULUM ANALYSIS FOR INDUSTRIAL ARTS WOODWORKING

Degree granted Ed. D. Date Jan. 20, 1970 No. of pages in report 155

Granted by: University of Arkansas (Name of institution) Fayetteville, Arkansas (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. to identify design topics which are fundamental to instruction in the area of industrial arts woodwork,
2. to determine the degree of emphasis presently placed on selected design content topics in industrial arts woodwork classes at the college level,
3. to determine the extent to which industrial arts woodwork educators and industrial wood-product designers agree on design content topics, and
4. to determine in what specific areas wood-product designers are utilized in indust

Source of Data and Method of Study:

Data were secured from the 83 per cent return of the 107 questionnaires mailed to industrial arts woodwork educators and 70 per cent retun of sixty questionnaires mail to industrial wood-product designers across the nation.

Findings and Conclusions:

1. Information concerning leaders, both past and present, who have been influential in developing the contemporary design concept, is not being emphasized strongly enough by industrial arts woodwork educators.
2. An adequate amount of industrial design literature is not being introduced and utilized in industrial arts woodworking courses.
3. Design terminology is not stressed adequately or strongly enough in today's woodworking courses.
4. Industrial arts woodwork students do not receive adequate instruction in the basic fundamentals of color.
5. In addition to wood, woodworking courses should include the study and usage of other industrial materials.
6. Industrial designers and woodowrk educators agree on design topics pertaining to wood technology.
7. Industrial wood-product designers placed a higher degree of emphasis on most design topics than did educators.
8. Although industrial arts woodowrk educators tend to under emphasize design in their classes, they do adequately stress an appreciation for good design.
9. Information about job opportunities in wood-product design is not sufficiently presented to industrial arts woodworking students.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Ivins, (Last name), Wilson (First name), Howard (Middle name)

Exact Title OBJECTIVES AND PRINCIPLES OF HIGH SCHOOL WORK EXPERIENCE.

Degree granted Ed.D., Date 1947, No. of pages in report 452

Granted by Univeristy of Colorado (Name of institution) Boulder, Colorado (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A descriptive analysis of the objectives and work experience programs as determined by: (1) A study of the literature of the field; (2) visiting and observing high school work programs in operation; (3) securing historical and other data from promary sources though correspondence; (4) securing facts and opinions in regard to the status of work experience in the several States from State departments of education; and (5) securing the opinions of educational specialists in the fields of secondary education, vocational education, philosophy-curriculum, and high school administration or work experience coordinators.

Source of data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Jackey, David, F.
(Last name) (First name) (Middle name)

Exact Title AN EVALUATION OF THE BASIC CURRICULUM OF VOCATIONAL TEACHER TRAINING IN TRADE AND INDUSTRIAL EDUCATION IN THE STATE OF CALIFORNIA.

Degree granted Ph.D., Date 1933, No. of pages in report 192

Granted by University of Pittsburgh Pittsburgh, Pennsylvania
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An investigation of the professional requirements of one state for the certification of its trade and industrial teachers. Attempts to evaluate the teacher training program on the basis of the data derived from teacher and supervisor judgment check lists.

Source of Data and Method of Study:

Findings and Conclusions:

378

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Jackson (Last name), Peter (First name), A. (Middle name)

Exact Title AN INVESTIGATION OF ATTITUDES OF COLLEGE INDUSTRIAL ARTS STUDENTS TOWARD INDUSTRIAL ARTS CLUB VALUES.

Degree granted Ed. D. Date 1965 No. of pages in report 208

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To identify values appropriate for college industrial arts clubs, and to evaluate, through the use of an attitude inventory instrument, the attitudes of college industrial arts club members and college industrial arts non-club members toward the values.

Source of Data and Method of Study:

The population groups used in this study were: 779 college senior industrial arts club members from 65 of the 87 selected institutions with industrial arts clubs located in 37 states; and 162 college senior industrial arts non-club members from 12 of the 16 selected institutions without industrial arts clubs located in 14 states. The instrument used in this study was a College Industrial Arts Club Attitude Inventory eeveloped by the writer. The instrument consisted of forty-five descriptive statements about nine selected values for college industrial arts clubs as delimited by a jury. The respondents rated each statement within the instrument in one of the five categories: "strongly agree", "agree", "uncertain", "disagree", or "strongly disagree". Composite mean scoares for the values were calculated. The "t" test was used to test the hypotheses.

Findings and Conclusions:

No significant differences appear between the two population groups and their sub-groups as to their attitudes about the values of college industrial arts clubs. Further conclusions suggest implications for action which could assist in improving industrial arts clubs and industrial arts education.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Jacobsen (Last name), Eckhart (First name), A. (Middle name)

Exact Title A COMPARISON OF COMPETITIVE AND COOPERATIVE LEARNING EXPERIENCES IN TECHNICAL DRAWING ON THE COLLEGE LEVEL.

Degree granted Ph. D., Date 1957, No. of pages in report 222

Granted by University of Connecticut (Name of institution) Storrs, Connecticut (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To compare the effects of competitive learning experiences with the effects of cooperative learning experiences relative to achievement in technical drawing; and to compare the attitudes of students participating in the experiences with regard to some of the characteristics common to these two learning situations.

Source of Data and Method of Study:

The experiment involved the members of the freshman class who were eligible to take technical drawing at the State Teachers College, Fitchburg, Massachusetts, during the September 1955 semester. Two sections were made by pairing individuals and then dividing each pair into two matched sections. Pairing was based upon scores made on intelligence and technical drawing aptitude tests. The significance of the difference between the means in terms of t values was used in comparing data.

Findings and Conclusions:

Students competitively organized achieved significantly less in problem selection and developed significantly poorer attitudes and interpersonal relations than did those cooperatively organized in a classroom learning situation. Although not significantly different, students cooperatively organized developed similar or better attitudes toward different aspects of understanding, use of resources, self-evaluation, and motivation than did those competitively organized.

No significant differences of achievement were found in either the acquisition of information or in the development of a demonstrable skill in technical drawing between those students competitively and cooperatively organized in a classroom learning situation.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Jacobsen (Last name), James (First name), Huffman (Middle name)

Exact Title A STUDY OF THE CONTRIBUTION OF INDUSTRIAL ARTS INSTRUCTION TO CONSUMER KNOWLEDGE.

Degree granted Ed. D. Date 1964 No. of pages in report 97

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To compare the consumer knowledge test results of senior boys attending high schools in the State of Illinois comprising the area identified as Round Table 14 by the Illinois State Board for Vocational Education. The results of the test were used to determine if students with industrial arts woodworking experiences had more consumer knowledge of wood and related materials and products than students having no industrial arts woodworking experiences.

Source of Data and Method of Study:

A list of consumer knowledge statements was assembled from many sources. Sixty-five of these were validated, to the behavioral outcomes of the "consumer knowledge" objective of the American Vocational Association, by the thirty-two industrial arts doctoral students in residence at Colorado State College during the summer session, 1963. The validated statements were used as the basis for the test questions. Twenty-seven high school senior boys were administered the test. To identify the strengths and weaknesses of the groups, the percentage of correct answers related to each behavioral outcome as listed by the American Vocational Association under its "consumer knowledge" objective was compared.

Findings and Conclusions:

1. Students with industrial arts woodworking experiences possess significantly greater consumer knowledge of wood and related materials and products than students without industrial arts woodworking experiences.
2. Their significant knowledge stems primarily from the ability to purchase wisely and use properly wood and related materials and products.
3. The shop organization or facility makes no significant difference in the consumer knowledge possessed by wood working students.

381

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Jahrman, Quain, K.
(Last name) (First name) (Middle name)

Exact Title RECRUITING PROSPECTIVE TEACHERS OF INDUSTRIAL EDUCATION.

Degree Granted Ed. D., Date 1964, No. of pages in report 113

Granted by University of Arkansas Fayetteville, Arkansas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To collect and analyze certain data that would be the basis of recommendations in a recruiting program for prospective teachers of industrial education.

Source of Data and Method of Study:

An interest and knowledge inventory instrument was administered to 102 boys in the eleventh and twelfth grades in five schools selected randomly. Data was analyzed by a one-way comparison of the means at the .01 level of significance.

Findings and Conclusions:

1. There is a tendency for students to have the same interests toward industrial education regardless of whether they were from a large school or from a small school, and whether or not industrial arts was a part of the curriculum in their respective schools.
2. There is a significant difference among students relevent to strong interests in industrial education for all classifications of schools.
3. No significant interaction exists between type of school and areas of industrial education. The type of school does not influence significantly the interests of the students in the various areas of industrial education.
4. Major differences exist in interests of students towards the six selected areas of industrial education used in this study. Students gravitate toward a preference to jobs relating to electricity and electronics, drafting and general shop, collectively. However, no differentiation in magnitude is expressed for students among these three areas. The students indicate a lesser interest in the areas of metals, industrial arts education and woods, but here again they made no distinction among the three areas.
5. There are no significant differences among students represented by different types of schools relevant to their lack of knowledge about industrial education.
6. Significant differences exist among the areas of industrial education for students in the various schools. Students indicate a greater knowledge relevant to jobs resulting from training in the area of general shop than in any if the other five areas.
7. There is no significant interaction between classification of schools and areas of industrial arts for students indicating a lack of knowledge about these areas.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Jared (Last name), Alva (First name), Harden (Middle name)

Exact Title THE EFFECTS OF AN EXTREME CLIMATIC CONDITION OF THE RELATIVE EFFICIENCIES OF HEATING AND AIR CONDITIONING A FRAME STRUCTURE AND A MASONRY STRUCTURE.

Degree granted Ed. D., , Date 1968 No. of pages in report 171

Granted by Arizona State University (Name of institution) Flagstaff, Arizona (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To identify and evaluate the difference between the amount of energy required to maintain equated insulated frame and masonry buildings within comparable temperature ranges during periods of heating and air conditioning.

Source of Data and Method of Study:

Two buildings were specifically designed for the purpose of this investigation. Each structure contained a 17,000 BTU per hour capacity heat pump which provided the specified inside temperature range. A sixteen-point recording potentiometer recorded the temperature at each respective thermocouple junction. Some fifty thermocouples were placed at various positions, and readings were obtained each week with the final comilations made on a monthly basis. These data were treated statistically.

Findings and Conclusions:

The insulated frame structure erected over a crawl space was more efficient than was the insulated masonry structure with respect to the economy of operational efficiency for both air conditioning and heating. The frame structure exhibited a percentage differential advantage of nineteen and four-tenths per cent advantage during the air-conditioning season and differential of nine and six-tenths per cent advantage during the heating season.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Jarvis (Last name), John (Middle name), A. (Middle name)

Exact Title STUDENT SURVIVAL FACTORS IN THE STOUT INSTITUTE

Degree granted Ph. D., Date 1953, No. of pages in report 236

Granted by University of Minnesota (Name of institution) Minneapolis, Minnesota (City, State)

Where Availble: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relationship between entrance tests, high school rank, selected high school subjects offered at college entrance, and freshman scholarship; to determine whether the entrance tests, high school rank, and selected subjects will assist in identifying those who will graduate.

Source of Data and Method of Study:

Data were taken from official records at the Stout Institute. Statistical techniques used consisted of analysis of variance, "t" test, zero order correlation, multiple correlation, regression equations, and chi square.

Findings and Conclusions:

High school rank possessed by those who graduate is significantly higher than those who do not. Prediction of success or failure in the shop subjects appears to be impractical. Prediction of scholastic success or failure for the academic subjects and for total scholarship seems to merit some consideration.

384

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Jasnosz (Last name), Thomas (First name), Adam (Middle name)

Exact Title A COMPARISON OF STUDENT ACHIEVEMENT IN VISUAL COMMUNICATION AND IN THE TRADITIONAL GRAPHIC ARTS APPROACH

Degree granted Ed. D., Date 1969, No. of pages in report ____

Granted by Arizona State University (Name of Institution) Tempe, Arizona (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C.( )

Purpose of Study:

To compare the effects of the visual communications and the traditional graphic arts instructional methods as concerns student achievement in the subject matter area of design.

Source of Data and Method of Study:

The experimental study utilized Campbell and Stanley's Separate-Sample Pretest-Posttest Control Group Design to compare achievement between an experimental and a control group as measured by Maitland Graves' Design Judgment Test, an achievement test administered to the population of the study. The comparison was made by an analysis of variance.

Findings and Conclusions:

1. There was a significant difference between the posttest experimental and the posttest control groups. The significantly higher (65%) improvement in mean score of the experimental group indicates that the experimental method, the visual communications approach, is more effective in teaching design in the high school than is the control method, the graphic arts approach.
2. There was a significant difference between the mean achievement of the pretest group and the mean achievement of the posttest group in both the experimental and the control groups. In both tests, the posttest scores were significantly higher than the pretest scores, indicating that growth had taken place.
3. There was no significant difference among the pretest or the posttest sub-groups of both the experimental and the control groups.
4. There was no significant difference between the mean achievement of the pretest experimental group and the mean achievement of the pretest control group, giving rise to the assumption that all four groups were equivalent at the inception of the study.
5. There is a significant difference between the two teaching methods. Visual communications appears to be more effective in teaching principles of design to high school students than the traditional graphic arts approach.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - NAITTE - AIAA

Author Jelden (Last name), David (First name), L. (Middle name)

Exact Title Electrical Informational Content Included in Industrial Arts Teacher-Education vs. Knowledge Required of Electronic Technicians.

Degree Granted Ed. D. Date 1960 No. pages in report 171

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To compare the basic informational content of textbooks and other instructional materials used in electrical courses offered to industrial arts majors in teacher-education institutions with the basic electrical knowledge required of persons who work with electronic devices in industry.

Source of Data and Method of Research: Data were secured from heads of departments of industrial (arts) education in 170 teacher-education institutions, instructors of electrical subjects in which industrial arts majors were enrolled, textbooks and other instructional materials used in electrical instruction for industrial arts majors and selected electronic manufacturing industries. The subject-matter analysis technique was used to obtain the topics of information contained in the instructional materials which were rated by industry.

Findings and Conclusions: More than one-fourth of the industrial (arts) education departments did not require their majors to take any course work in electricity and/or electronics. Fifty percent of the electrical instruction is given in the industrial (arts) education department only and the physics and industrial (arts) education department together accounted for 72.5 percent of the electrical instruction. There is general agreement regarding content of electrical instructional materials, but few sources analyzed contained topics about recent developments in the area of electricity and electronics, such as transistors. Some lack of agreement exists in industry about required knowledge of electronics technicians. More electrical instruction should be required of Industrial Arts majors.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Jenkins, Jr. (Last name), James (First name), (Middle name)

Exact Title THE CONTENT OF REQUIRED INDUSTRIAL ARTS FOR BOYS.

Degree granted Ed.D., Date 1955, No. of pages in report 167

Granted by The Pennsylvania State University (Name of institution) University Park, Penn. (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To find the tool manipulations, information, attitudes, and habits that could be taught in industrial arts that are the most useful to most people.

Source of Data and Method of Study:

Data were secured by a questionnaire containing 490 items of instruction in industrial arts, which were evaluated on a four point scale of usefulness by 1893 junior high school boys, 262 laymen, 109 shop foremen, and 51 labor leaders selected from all over the United States.

Findings and Conclusions:

The study resulted in a list of items of instruction in industrial arts that the respondents considered most useful. Items receiving the highest ratings may be classified as safety, attitudes and habits, and general care of tools and machinery. A different list of items of instruction is not necessary in different geographic areas or in communities with predominately different occupational classifications.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Jennings, Gerald, L.
(Last name) (First name) (Middle name)

Exact Title THE ROLE OF INDUSTRIAL ARTS IN THE ACHIEVEMENT OF SELECTED OBJECTIVES OF ECONOMIC EFFICIENCY AS PERCEIVED BY MICHIGAN INDUSTRIAL ARTS TEACHERS.

Degree granted Ph.D., Date 1968 No. of pages in report

Granted by Michigan State University East Lansing, Michigan
(Name of Institution) (City, State)

Where Available Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To clarify the role of industrial arts in the achievement of those objectives for education that are concerned with developing economic efficiency. Its specific purposes were (1) to describe student behaviors that represent the achievement of economic competence, (2) to determine whether selected groups of secondary level industrial arts teachers have significanly different perceptions of the student behaviors to be sought in industrial arts, and (3) to determine whether the teacher perceptions are significantly different from those of leaders in industrial arts teacher education.

Source of Data and Method of Study:

A review of literature concerned with economic life-activities provided a description of subject matter, and student needs and behaviors associated with developing economic competence. The chi-square median test served as the test of significance for ten hypothesized and two non-hypothesized variables.

Findings and Conclusions:

1. Teachers of lower socio-economic class students perceive the role of industrial arts in the achievement of objectives of economic efficiency as less important than teachers of middle or upper class students.
2. Teachers with very large classes (averaging 31 or more) perceive the role of industrial arts in the achievement of objectives of economic efficiency as less important than teachers with medium size or small classes (less than 31 students).
3. Teachers in the early years of their teaching careers (1-3 years) perceive the role of industrial arts in the achievement of the objectives of economic as more important than teachers who have taught for a number of years (more than 3 years).
4. Secondary level industrial arts teachers generally perceive the role of industrial arts in the achievement of the objectives of economic efficiency as less important than the leaders in industrial arts teacher education.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Jetter, Everett, Vail
(Last name) (First name) (Middle name)

Exact Title A SURVEY OF MORRIS COUNTY, NEW JERSEY, FOR THE PURPOSES OF SECONDARY VOCATIONAL EDUCATION.

Degree granted Ph.D., Date 1932, No. of pages in report 132

Granted by New York University Washington Square, New York
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

An analysis of the social, econimic, and geographic conditions of the county. Employment conditions, pupil population, and legal considerations were analyzed in connection with establishing a county vocational school.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Jochen (Last name), Albert (First Name), Edward (Middle name)

Exact Title THE HISTORY AND DEVELOPMENT OF STATE- AND FEDERALLY-AIDED DAY TRADE AND INDUSTRIAL SCHOOLS IN NEW JERSEY FROM THEIR INCEPTION TO 1943.

Degree granted Ed. D., Date 1947, No. of pages in report 369

Granted by Rutgers University (Name of institution) New Brunswick, N.J. (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Historical study of State- and Federally- aided day trade and industrial education in New Jersey from its inception to 1943. Presents a good educational picture of the history, development, and organization of the State Education Department, Vocational Division, and all county and city systems of trade and industrial education in New Jersey. Significant trends, developments, and implications are also included.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Johnson (Last name), Delton (First name), Lee (Middle name)

Exact Title State Handbooks for Industrial Arts: A Comparison of Content With Judgments of Leaders and An Examination of Trends Reflected in These Publications.

Degree Granted Ed. D., Date Jan. 1968. No. pages in report 197

Granted by University of Arkansas (Name of Institution) Fayetteville, Arkansas (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: The purpose of this study was three-fold: (1) to determine the extent to which state industrial arts publications reflect the thinking of contemporary leaders, (2) to identify curricular trends in state publications, and (3) to provide a set of guide-lines for preparing state handbooks for industrial arts.

Source of Data and Method of Study: Data for this study were obtained through a documentary analysis of state industrial arts publications and a survey of a national jury of leaders. The documentary analysis procedure employed a word count technique. A statistical comparison was made between the degree of emphasis placed upon various topics in current and older publications. Also, the degree of emphasis placed upon topics in current state handbooks was statistically compared with the degree of emphasis assigned to these topics by a jury of leaders.

Findings and Conclusions: Few significant curricular trends were discerned. The older material placed a significantly greater degree of emphasis on topics concerned with: public relations, pupil personnel systems, the traditional project method, sources of teaching materials and the teaching of general crafts. The newer material placed significantly greater emphasis upon the teaching of electricity-electronics and metalworking. Although they were not statistically significant, signs of an increasing emphasis on mass production, problem-solving, research and experimentation as industrial arts teaching methods were evident. A marked increase in the percentage of words devoted to the teaching of specific industrial arts courses was evident in those publications issued during and after 1962.

As a group, the leaders who made up the jury for this study favor more comprehensive state guidebooks than those currently being issued; they favor placing moderate to much emphasis on a few topics. Nearly three-fourths of the jurors believed that future state publications should emphasize the organization of instructional experiences around such broad areas as manufacturing, communications, power and transportation. On the average, members of the jury felt that state publications should be revised about every three and one-half years.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Johnson (Last name), Harry (First name), Leroy (Middle name)

Exact Title CURRICULUM DEVELOPMENT IN VOCATIONAL-TECHNICAL EDUCATION: WITH SPECIAL REFERENCE TO THE NORFOLK DIVISION OF VIRGINIA STATE COLLEGE.

Degree granted Ed. D., Date 1955, No. of pages in report 143

Granted by Wayne State University (Name of institution) Detroit, Michigan (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the need for vocational-technical education programs in the Tidewater area of Virginia and the feasibility of offering such programs at the Norfolk division of Virginia State College.

Source of Data and Method of Study:

Personal interviews with personnel directors, managers, and owners of selected industrial firms in the area.

Findings and Conclusions:

Many technical areas of need were discovered in the Norfolk-Portsmouth community. The curriculum in electronics and electricity showed the greatest potential in terms of annual replacements. Building construction, automotive, general business, and general supervision technologies followed in that order with relatively high replacement needs in all. The time required ranged from 1 to 3 years, full-time training. There is a need for additional training centers for technicians and experience indicated that the community college had been successful for this purpose.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Johnson (Last name), Marvin (First name), E. (Middle name)

Exact Title PRACTICES IN THE SELECTION OF APPRENTICES FOR TRAINING AND THEIR RELATION TO THE COMPLETION RATE.

Degree granted Ed. D., Date 1959, No. of pages in report 187

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the practices employed in the selection of apprentices in a group of apprenticeship training programs, and to find out the extent to which the selection policies, practices, and devices used in the apprenticeship training programs varied with the apprentice completion rate.

Source of Data and Method of Study:

Information forms which were filled out and returned by persons recommended as being most familiar with the practices of selecting apprentices for 143 apprenticeship programs in the manufacturing industry and 46 programs in the construction industry. The apprenticeship programs included in the study represented all areas of the State of Illinois.

Findings and Conclusions:

Representatives of management and labor played an important part in the selection of apprentices for training. The sons and relatives of craftsmen and the companies' employees were the major sources of applicants for apprenticeship training. A wide variety of selection practices and devices were used in evaluating the qualifications of applicants for apprenticeship training. Apprentice-selection officials considered the most effective devices used in selecting youth for training to be the interview, application forms, references, testing program, and probationary period. Although the various selection devices and methods are probably better predictive devices than the subjective opinions of selection officials when appraising and evaluating the personal qualifications of applicants, there seemed to be little or no relationship between the percentages of apprentices completing training in the programs and the use of application forms, employment tests, interviews, and personal references. It seemed evident that many other factors were involved in the problem of selecting apprentices and that there was a need for developing closer working relationships among all groups interested in apprenticeship training.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Johnson, Rufus, G.
(Last name) (First name) (Middle name)

Exact Title A STUDY OF SELECTION AND GUIDANCE PROCEDURES FOR STUDENTS IN THE PROGRAM OF INDUSTRIAL ARTS TEACHER EDUCATION AT THE STATE TEACHERS COLLEGE, CHEYNEY, PENNSYLVANIA.

Degree granted Ed.D., Date 1949, No. of pages in report 169

Granted by Pennsylvania State College State College, Pa.
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpoase of Study:

To ascertain the current admission practices in industrial arts teacher education programs on a national basis. To discover background factors, interests, and achievements of the students included in the study in an effort to reach a better understanding of those being taught and to help determine their probable fitness as prospective industrial arts teachers. To offer recommendations for improvement of the selection and guidance at Cheyney.

Source of data and method of study:

The construction of a questionnaire and an analysis of the returns covering admission practices in industrial arts teacher education programs. The preparation and use of an interview guide, the conducting of personal interview guide, the conducting of personal interviews with 40 students in the study, and an analysis of these findings. The development and administering of a test battery which included mechanical apitude, intelligence, personality, educational achievement, health, and vocational interest tests. A summarization in the form of student profiles.

Findings and Conclusions:

Admission Practices: wide variation in admission practices among the 100 institutions in study. Also true for colleges and universities within a given State. The 4 most frequently used admission requirements are health examination, high school standing, judgment of high school teachers, and intelligence tests. Nineteen per cent of the instutution required high school graduation only. Testing program: For most part, non-language quotients are higher than the language quotients in the test on mental maturity. Low scores are found for both groups on numerical reasoning sub-tests on mental maturity. Self-adjustment percentile ranking exceed, in most cases, the social adjustments rankings on the personality test. Approximately one-half of the students of each class show some major physical defects. Interviews: Definite sense of the importance of industrial arts curriculum manifested. Reference was made to what students considered to be inadequacy of the high school industrial arts set-up and teaching. "Most difficult" subjects reported were electricity and mathematics. "Most interesting," woodwork and mechanical drawing.

394

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Johnson, Verner, Bernhard
(Last name) (First name) (Middle name)

Exact Title SUPERVISION OF STUDENT TEACHING IN INDUSTRIAL ARTS: PERSONNEL AND PRACTICES.

Degree granted Ed.D., Date 1966, No. of pages in report 221

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To examine the background of the personnel and the practices which they employed in supervising industrial arts student teachers.

Source of Data and Method of Study:

270 supervisors of industrial arts student teachers in the United States and Puerto Rico were asked to rate on an information form the extent to which they employed 156 practices in supervising industrial arts student teachers. They were also asked to rate these in terms of the importance they felt the practices should hold.

Findings and Conclusions:

1. 202 supervisors had industrial arts backgrounds which included college work in technical and professional courses in industrial education.

2. Nearly all respondents had earned advanced degrees; about half held doctorates.

3. Experience background of the supervisors included teaching industrial arts courses on secondary and college levels. Most of the respondents reported having industrial and/or adminstrative experience.

4. The 156 practices were employed to approximately the same extent by supervisors with industrial arts training and supervisors without industrial arts training.

5. The practices were rated approximately the same in importance by both groups.

6. The practices used most were those of a general nature involving observing and evaluating the student teacher.

7. The practices used least included those which involved audio and video tape recordings and practices which personally involved the college supervisor in the student teacher's lessons.

8. Practices of observation were used more and rated higher in importance than any other category.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Johnston, John, L.
(Last name) (First name) (Middle name)

Exact Title TEACHER-DEMONSTRATIONS VERSUS SHOP ACTIVITIES IN THE TEACHING OF ELECTRICITY: AN EXPERIMENTAL COMPARISON.

Degree granted Ed. D., Date 1956, No. of pages in report 191

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relative effectiveness or superiority of teacher demonstrations and shop activities in the teaching of general electricity at the college level.

Source of Data and Method of Study:

An experimental comparison of the two instructional methods in a college teaching situation involving 106 college industrial education students of general electricity and continuing over a period of 2 school years. For purposes of comparing educational outcomes, 38 pairs of students were matched on mental ability and initial status in the subject. Data were handled by testing the mean differences for statistical significance.

Findings and Conclusions:

Insofar as the acquiring of information was concerned, the teacher demonstrations were found to be super[illegible] to shop activities as used in the study. The expense involved in the use of [illegible] demonstration method was found to be less than that of the shop-activity method. In terms of effort required on the part of the instructor, the demonstration method was found to be superior to the shop-activity method. No significant difference was found to exist between the two groups as to attitudes expressed toward the subject when taught by the respective methods. As defined and used in the study, and in terms of the stated criteria, teacher demonstrations of electrical principles and their application are superior to, or more effective than, shop activities in the teaching of general electricity to industrial education students at the college level.

396

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Johnston (Last name), Wallace (First name), Lamont (Middle name)

Exact Title FACTORS INFLUENCING CERTAIN PRE-ENGINEERING STUDENTS IN SELECTING A FOUR-YEAR INSTITUTION FOR THE COMPLETION OF AN ENGINEERING DEGREE.

Degree granted Ed. D., Date 1968, No. of pages in report

Granted by Texas A & M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the factors which influence pre-engineering students to select a four-year institution for obtaining a degree.

Source of Data and Method of Study:

The source of data was the students enrolled at forty private and public junior and twenty-five senior colleges in Texas. A questionnaire was used to obtain data concerning the students' (a) educational history (b) personal background (c) attitudes towards engineering colleges and (d) personal criteria for selecting a college.

Findings and Conclusions:

By means of chi square analysis, the only factors which seemed to be significantly related to the selection of a four year college were socioeconomic background, financial considerations and advice of relatives. The conclusion was made that the students' immediate home environment has the greatest influence on his selection of a four year transfer college.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Jones, Gary, H.
(Last name) (First name) (Middle name)

Exact Title STUDENT PRODUCED VIDEO TAPED AND LIVE INSTRUCTIONAL LESSONS AS THEY RELATE TO SATISFACTION, IMPROVISATION, AND RECIPROCITY.

Degree granted Ed. D., Date 1969, No. of pages in report 87

Granted by Utah State University Logan, Utah
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This descriptive comparative analysis considered the reactions of two independent groups of students who produced either live or video taped instructional lessons related to classwork. The purpose of this study was primarily that of identification, explanation, and comparison of those factors that students perceived as beneficial and rewarding within two similar instructional settings.

Source of Data and Method of Study:

The source of the data for the study is an infinite universe composed of: (1) Utah industrial education students in grades ten through fourteen; (2) classes in which closed circuit television including a video tape recorder was readily available to participants; (3) an activity setting in which productions, live and video taped, were prepared, rehearsed, and taped apart from class time; (4) competent and cooperative teachers and administrative personnel; (5) classes that were willing to participate in the project; (6) groups of three students responsible for production of an instructional lesson; (7) an activity setting that was student-centered, process and task oriented; and (8) classroom presentation and evaluation. A content analysis of statements written by the students was exploratory in nature, and it supplied data related to the perceived favorable and unfavorable aspects of the two activity settings. A forty-item opinionnaire was employed to consider student opinion concerning hypotheses related to satisfaction, improvisation, and reciprocity. Critique sessions which followed each classroom presentation constituted a third method for observing participant and audience reactions to the student produced lessons.

Findings and Conclusions:

Definite trends and consistencies were obvious between the content analysis of statements written by the students, the student opinionnaire, the critique sessions, and the investigator's personal observations. The observations and findings resulting from this comparative analysis indicate that the inclusion of a video tape recorder into an activity setting, in which students produced instructional lessons, considerably infludenced the participants' perceptions regarding satisfaction, or need gratification, and improvisation. The satisfaction and improvisation hypotheses were accepted, and the reciprocity hypothesis was rejected.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE- NAITTE

Author Jordan (Last name), Kenneth (First name), F. (Middle name)

Exact Title AN ANALYSIS OF THE CONTENT OF COMPUTER TECHNOLOGY WITH IMPLICATIONS FOR TECHNICAL EDUCATION.

Degree granted ______ Date ______ No. of pages in report ______

Granted by University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. To ascertain the extent to which computer technology is utilized in industry.
2. To identify and describe the body of content related to the field of computer technology.
3. To ascertain the relative importance of blocks of computer technology in the preparation of technicians.

Source of Data and Method of Study:

The procedures used to gather data were an information form sent to selected manufacturing industries, a survey of related literature to identify content items related to computer technology, a rating check list of these content items sent to a group of computer specialists, and a rating check list of the blocks of content items sent to technicians.

Findings and Conclusions:

1. At the time of the study, computer utilization within industries was at the business data processing and engineering applications levels.
2. If projections fro five years hence materialize, usage of computers for production purposes will substantially increase.
3. With the exception of data processing technicians, technicians in general did not require extensive knowledge and skills in computer technology.
4. Since eleven items of content received "essential" ratings by at least one-half of the computer specialists, these items should be emphasized in training programs in computer technology.
5. Computer technology is a dynamic body of knowledge in which changes should be anticipated.
6. Different types of technicians require significantly different competencies in computer technology.

399

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Jordan (Last name), Thomas (First name), F. (Middle name)

Exact Title THE PROBLEM OF VOCATIONAL EDUCATION AND THE CATHOLIC SECONDARY SCHOOL.

Degree granted Ph. D., Date 1942, No. of pages in report 185

Granted by Catholic University of America (Name of institution) Washington, D.C. (City, State

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

By tracing the evolution of vocational education, examining the present concepts, and analyzing the needs of youth, the writer substantiates his recommendations for a curriculum for all secondary schools which will provide a fuller general education program.

Source of data and method of study:

Findings and Conclusions:

400

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Julian (Last name), Lester (First name), John (Middle name)

Exact Title FLEET AIR CRAFT SERVICE SQUADRON TRAINING IN THE UNITED STATES NAVY.

Degree granted Ph. D., Date 1953, No. of pages in report 208

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To examine the scope, objectives, and techniques used in naval training, to develop a manual, and to formulate criteria for appraising the training in Fleet Air Craft Service Squadrons.

Source of data and method of Study:

Data were secured by a study of literature and direct observation and interviews with training officers of four active Fleet Aircraft Service Squadrons.

Findings and Conclusions:

A set of criteria was established which the Navy could use in establishing future training programs. A curriculum for training aircraft squadron personnel was developed, installed, and evaluated. The writer then submits a series of recommendations designed to strengthen the training and educational program of each of the four Service Squadrons studied.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kachel (Last name), Stanley (First name), (Middle name)

Exact Title An Identification of Philosophical Beliefs of Professional Leaders and Industrial Arts Teachers.

Degree granted Ed. D., Date Summer 1967, No. of pages in report 228

Granted by Colorado State College (Name of institution) Greeley, Colo. (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. (x)

Purpose of Study: To determine certain basic beliefs of industrial arts personnel, primarily in Oklahoma, and to indicate categories and degrees of agreement and disagreement.

Source of data and method of study: Statements reflecting beliefs related to industrial arts were isolated from the literature of the field. These statements were then submitted to a panel of judges for evaluation and critical analysis. An opinionaire of 130 statements was formulated. Six areas of beliefs concerning industrial arts were studied. Three groups participated in the response. The statements were checked for one of six values ranging from disagree strongly to agree very strongly. The amount of disagreement or agreement among the three groups was classified by arithmetic means, rank orders, and percentages. Groups, prominent peoples in area of industrial arts, college level industrial arts teachers, and public school industrial arts teachers.

Findings and Conclusions: The respondents from the three groups showed positive agreement in the methods area. They were in general agreement with statements related to objectives. The area of course content reflected confusion. The method of evaluating student progress indicated indifference. The area of industrial arts curriculum produced an erratic pattern of responses.

From the results of this study it appeared that in some areas, certain uniformity in thinking is apparent, as follows: Industrial arts seemed to be accepted as a phase of general education, and was seen as contributing to the education of all individuals. At the Junior high level, industrial arts should provide a wide range of experiences. For instruction to be functional, the industrial arts teacher should be acquainted with modern industry. The population did not agree that industrial arts teachers teach toward predetermined goals. The population did not agree to a national curriculum of basic courses. The prominent persons seemed to be more theoretical in their responses than did either the Oklahoma College teachers or the Oklahoma classroom teachers.

407

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kaffer, (Last name), Fred (First name), C. (Middle name)

Exact Title SYRACUSE OCCUPATIONAL SURVEY, SYRACUSE, NEW YORK.

Degree granted Ed.D., Date 1941, No. of pages in report 293

Granted by New York University School of Education (Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A survey of manufacturing industries, distributive occupations, building trades, clerical occupations, transportation, and communications in Syracuse for the period 1937-39. Occupational status and trends of vocational opportunities are included.

Source of Data and Method of Study:

Findings and Conclusions:

403

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kagy (Last name), Frederick (First name), David (Middle name)

Exact Title THE STATUS AND PROBLEMS OF THE INDUSTRIAL ARTS TEACHER IN COLORADO, 1957.

Degree granted Ed. D., Date 1959, No. of pages in report 146

Granted by University of Wyoming (Name of institution) Laramie, Wyoming (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To show the status and instructional problems of teachers of industrial arts in their teaching situations in Colorado.

Source of Data and Method of Study:

Questionnaires sent to industrial arts teachers of Colorado. The criteria for judging the results of the questionnaires were based on a review of literature and the findings of a jury of experts.

Findings and Conclusions:

Industrial arts teachers are becoming better qualified--almost half of them hold master's degrees--are relatively happy in their teaching situations--working hours and class sizes have been greatly reduced in the last 10 years, and salaries have increased--and the number of industrial arts teachers is growing--there has been a large influx from other States. The bulk of industrial arts teaching is confined to junior and senior high.

404

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kaplan (Last name), Harold (First name), (Middle name)

Exact Title A COURSE OF STUDY FOR ENTRANCE PRODUCTION WORKERS IN THE RADIO MANUFACTURING INDUSTRY.

Degree granted Ed. D., Date 1956, No. of pages in report 403

Granted by New York University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To develop a course of study for the training of entrance production workers in the radio manufacturing industry.

Source of Data and Method of Study:

Questionnaires, checklists, visits to manufacturing plants, interviews with production personnel at all levels, job analyses of entrance production jobs, and reference to the Dictionary of Occupational Titles. Data were verified through the use of juries of experts in the fields of radio production and radio instruction.

Findings and Conclusions:

A complete course of study for entrance production workers was developed. The course consisted of a group of job sheets for training the learners in basic operations, and a group of operation sheets for training the learners in the production-line portions of the course.

405

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Karnes, John, W.
(Last name) (First name) (Middle name)

Exact Title THE ORGANIZATION AND ADMINISTRATION OF INDUSTRIAL EDUCATION ON THE STATE LEVEL.

Degree granted Ed.D., Date 1951, No. of pages in report 253

Granted by University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To analyze the qualifications of professional personnel in the industrial education division of state departments of education; to identify areas of work with which they are concerned, along with what functions they do and/or should perform; and, to record the ideas and opinions held by various groups of educators concerning some issues confronting industrial education at the state level.

Source of data and method of study:

Data were obtained through five different inquiry forms from state directors of industrial education, industrial teacher educators, public school superintendents, local directors of industrial education at the local level. All forty-eight states were represented.

Findings and Conclusions:

Few specialists are employed. The greatest need for additional professional personnel is in the general rather than specialized postions. Divisions of state departments of education concerned with both industrial arts and vocational-industrial education should be designated as "industrial education." Industrial education personnel in state departments should perform more functions relating to local assistance, research, and apprenticeship. Except where size does not warrant, the organization of states into districts or regions with professional personnel in charge of each, will probably facilitate administration and supervision in the statewide program. All phases of industrial education should be administered and supervised by a single agency in the state department of education under the direction of a professionally qualified person. Certain professional courses in industrial education should be designed for teachers in all phases of industrial education. Courses designed to give a practical understanding of the objectives and philosophy of all phases of industrial education should be included in the professional preparation of principals and superintendents.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Karnes (Last name), M. (First name), Ray (Middle name)

Title EVOLVING CONCEPTS OF INDUSTRIAL EDUCATION IN THE THINKING OF ORGANIZED LABOR.

Degree granted Ph. D., Date 1948, No. of pages in report 397

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study tracing the origin and development af ideas and attitudes toward industrial education on the part of organized labor from 1880 to 1948, as reflected in published reports and records. Topics indlude labor's early inorganized labor and the national movement for vocational education, and the evolution of labor's attitudes and policies on specific issues in industrial education.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Kavieff (Last name), Melvin (First name), Charles (Middle name)

Exact Title Requirements for Selected Occupations in the Automotive Industry with Implications for Technical Education at the Postsecondary Level.

Degree Granted Ed. D. Date 1961 No. pages in report 258

Granted By Wayne State University (Name of Institution) Detroit, Michigan (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To determine requirements for selected occupations in the automotive manufacturing industry of the Detroit metropolitan area, with implications for technical education at the postsecondary level.

Source of Data and Method of Research: A review of the literature in the area of post-secondary education was made. Various definitions for the technician were reviewed and analyzed to develop an operational definition for the study. A survey was conducted to obtain a consensus from industrial and educational authorities concerning technical occupation configuration and growth in the years ahead.

Findings and Conclusions: The technician now defined and described in the literature has no rigid delimitation with regard to his function, range of operation, and definition.

A definite need exists for the development of educational programs and facilities to prepare industrial technicians for the Detroit automotive industry at the postsecondary level. It was determined that there were two technicians for every engineer in the Detroit automotive industry in 1960. Technicians are one of the fastest growing major occupational classifications in the United States.

The private technical institute has been quicker to adapt its programs to meet new and changing occupational needs than has the publicly controlled school.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Keener (Last name), Clyde (First name), (Middle name)

Exact Title A STUDY OF THE GENERAL EDUCATIONAL CONTRIBUTIONS OF INDUSTRIAL ARTS.

Degree granted Ed. D., Date 1959, No. of pages in report 128

Granted by University of California (Name of institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the nature and extent of the contributions of selected industrial arts classes (junior high school woodshop) to general education.

Source of Data and Method of Study:

From observation of the classes conducted by 15 teachers, the behaviors of 1,200 students were recorded. Each class was observed twice. The evaluation form in Behavioral Goals of General Education was completed by interviewing each teacher in the study. Observed student behaviors were matched with 99 statements of behavioral outcomes listed in the instrument and the frequencies reported.

Findings and Conclusions:

Of the 99 behavioral outcomes on the instrument, 47 were observed in the classes. Based on frequency of observed behavior it seems that the selected courses contribute to general education in the areas of (1) attaining maximum intellectual growth and development, (2) becoming culturally oriented and integrated, (3) maintaining and improving physical and mental health, (4) becoming economically competent in growth toward self-realization and desirable interpersonal relations in small groups. The teachers showed no consistency in their attitudes toward general education, and there seems to be no causal relationship between their attitudes and observed student behavior.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Keil (Last name), Raymond (First name), L. (Middle name)

Exact Title FACTORS ASSOCIATED WITH THE EFFECTIVENESS OF PERSONNEL IN POSITIONS APPROPRIATE FOR DEGREE-LEVEL INDUSTRIAL TECHNOLOGISTS.

Degree granted Ph.D., Date 1966, No. of pages in report ______

Granted by Michigan State University (Name of Institution) East Lansing, Michigan (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To identify those factors associated with the effectiveness of management-oriented technical personnel employed by a major chemical company during a specified six-year period at the intermediate ranges of technical employment where graduates of baccalaureate degree-level industrial technology curriculums offered by divisions or departments of industrial education might be employed.

Source of Data and Method of Study:

The company personnel records of thirty-five identified high achievers from four functional areas of employment were investigated, and the critical incident technique was utilized to collect, through personal interviews, 106 reports of critical incidents of effective on-the-job performance. The data from the critical incident reports were analyzed on the basis of three dimensions: (1) type of skill utilized, (2) functional task performed, (3) primary medium of involvement.

Findings and Conclusions:

1. The six functional tasks of "investigating", "evaluating", "coordinating", "negotiating", "consulting", and "initiating" were identified in higher percentages of the critical incidents (37% to 52%) than the functional tasks of "planning", "promoting", and "organizing" which were identified in lower percentages (21% to 26%) of the critical incidents.
2. There was no identifiable pattern of behaviors common to all four functional groups studied.
3. The human relations medium was most frequently identified as the principal medium of involvement associated with effectiveness.
4. The five established skill categories--conceptual, human relations, technical, communication, and business and organizational--were all utilized in high percentages of the critical incidents reported (65% to 85%); however, human relations, technical, or business and organizational skills were classified most frequently as the "most important" skill associated with the key effective behavioral act.
5. The thirty-five high achievers most frequently cited company job experience and specific technical courses as having contributed to their effective performances.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA ACIATE - NAITTE

Author Keim , Lawrence ,
(Last name) (First name) (Middle name)

Exact Title A STUDY OF PSYCHOMETRIC PROFILE PATTERNS OF SELECTED ASSOCIATE DEGREE TECHNOLOGY MAJORS.

Degree granted Ph. D. , Date 1966 No. of pages in report 150

Granted by Purdue University Lafayette, Indiana
(Name of institutiin) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study;

The study was designed to determine whether differences among five curriculum groups could produce information which would be useful in counseling students interested in the ;two year technologies.

The curriculum areas were: Aviation Maintenance Technology, Architectural Engineering Technology, E;ectrical Engineering Technology, Industrial Illustration Technology, and Mechanical Engineering Technology.

Source of Data and Method of Study:

Four instruments were used:

(1) Kuder Preference Record
(2) Allport-Vernon Study of Values
(3) Guilford-Zimmerman Temperatment Survey
(4) The Wonderlic Personnel Test.

Subjects were 200 males, 40 each from the ; five areas in the School of Technology Purdue University. One hundred were beginners and one hundred were transfers.

Findings and Conclusions:

RESULTS:

1. No significant difference between beginners and transfers was noted.
2. A significant difference in interest profiles was shown.
3. There was a significant difference between "engineering-oriented" and non-engineering oriented" one two of the six scale used.
4. Personality measures (G-Z) were insensitive to differentiation in the five levels.
5. There was a significant difference in ability among and between beginners and transfers in the "engineering oreiented " group.
6. There was no significant difference in age for beginners.

Conclusions:
1. Instruments used may be useful in counseling those interested in the two-year technologies. (KPR and AV)
2. The GZ does not appear to be useful in ;this regard.
3. The WPT has limitations due to differentiating factors.
4. Age does not appear to be a factor in counseling students.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Keith (Last name), Charles (First name), William (Middle name)

Exact Title THE INDUSTIRAL TECHNOLOGY PROGRAM AT KENT STATE UNIVERSITY, AN APPRAISAL AND RECOMMENDATIONS.

Degree granted Ph. D., Date 1964 No. of pages in report 379

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To evaluate the Industrial Technology program at Kent State University. Procedures were to determine common goals for four year industrial technology programs; to study programs in other colleges; to develop criteria for the programs; to evaluate in terms of the criteria and to recommend needed changes at Kent State University.

Source of Data and Method of Study:

Sixteen criteria for an industrial technology program were developed and validated. Questionnaires based upon these criteria were prepared and sent to 49 chairmen of industrial technology programs, 91 graduates of Kent State University program, and 47 industrial supervisors of the graduates. Results from the three questionaires were itemized and tabulated.

Findings and Conclusions:

1. The catalog should reflect the purposes of the program.
2. The teaching staff should have had two to five years industrial experience, 15 to 30 semester hours of professional preparation, 18 to 40 semester hours in special allied areas, and at least a Master's Degree.
3. Proficiency in teaching is essential and writing for publication is important.
4. The physical plant should provide sufficient space and appropriate up-to-date equipment to meet the requirements of the program.
5. Fiscal allocations should be sufficient to support the program.
6. An advisory committee composed of employers, graduates of the program, parents, and educators should participate in the development and operation of the program.
7. Staff members should be actively identified with professional, educationsl, and industrial organizations.
8. The industrial technology program at Kent State University fully met six of the criteria extablished for a good program, partially reflected one of them, and failed to meet fully the standards of nime. Appropriate recommendations were made whereby these standards could be fully met.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Kemp, William, Harry
(Last name) (First name) (Middle name)

Exact Title An Analysis of Basic Concepts of Graphic Arts.

Degree granted Ed. D., Date Spring 1966 No. of pages in report 192

Granted by Colorado State College Greeley, Colorado
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. (x)

Purpose of Study: To determine the degree of unity among graphic arts teacher-educators and high school graphic arts teachers with regard to concepts. Comparisons between the two groups involved the priority of basic concepts and the general types of activities which would bring about their attainment.

Source of data and method of study: An instrument consisting of two card sorts and two specially designed rating scales was completed by 104 graphic arts teacher-educators throughout the country and 109 high school graphic arts teachers in public schools of selected metropolitan centers of the Midwest. These teachers ranked twelve basic concepts of graphic arts developed by a national committee by sorting cards that contained clusters of experience statements representing the concepts. They also sorted cards to assign a priority to informational and operational types of activities. Data was used to compare the two groups statistically.

Findings and Conclusions: There was no significant difference in the way the two population groups ranked the concepts. Both groups ranked the concept concerned with design as the most important and the concepts concerned with bookbinding and raw and semi-manufactured materials as the least important. Both groups expressed a preference for the operational experiences over the informational on the eight concepts which lend themselves to manipulative activities. No difference seemed to exist between the two groups in their selections of the levels of learning. Both groups selected the levels involving application with understanding as the most descriptive and the memorization level as the least descriptive of the "ideal" high school graphic arts student.

It was concluded that graphic arts programs at both the college and high school levels stress operational experiences more than informational experiences and both population groups have definite feelings as to the importance of basic concepts. It was also concluded that both groups minimize memorization learning and emphasize application with understanding.

413

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kent (Last name), Ronald (First name), W. (Middle name)

Exact Title PRACTICAL CURRICULUM REVISION FOR THE ESSEX COUNTY VOCATIONAL SCHOOLS.

Degree granted Doctors, Date 1931, No. of pages in report

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

414

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Keseman, Charles, Edward
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF THE EFFECT OF THREE EVALUATION APPROACHES UPON STUDENT ACHIEVEMENT IN COLLEGE LEVEL DRAFTING.

Degree granted Ed. D., Date 1967, No. of pages in report 244

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of 1Study:

To determine the effect of "student self-evaluation," "instructor selective evaluation," and "instructor total evaluation" of college level drafting assignments upon student achievement.

Source of Data and Method of Study:

Data were obtained from three controlled groups at Central Missouri State College. The three groups were the "student self-evaluation," "instructor selective evaluation," and "instructor total evaluation" groups.

Findings and Conclusions:

1. The study did not produce a significantly superior approach for advancing the development of drafting skills.
2. Self-evaluating students completed their assignments faster than students evaluated by the instructor.
3. Students whose assignments were "instructor selective evaluated" were more inconsistent in predicting final grades.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Kigin, Denis, John
(Last name) (First name) (Middle name)

Exact Title Tort Liability Affecting Shop Teachers With Provisions For Avoiding Accidents and Litigation.

Degree granted Ed. D., Date 1959, No. pages in report 209

Granted by University of Missouri Columbia, Missouri.
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain to what extent shop teachers are held liable in court actions resulting from classroom accidents. It sought to point out what legal protection is available to shop teachers, with possible methods of avoiding accidents and litigation, and to make shop teachers aware of the need for a basic understanding of law as it affects them in their everyday school activities.

Source of data and method of study: Data utilized in this study were obtained from: information forms sent to State Supervisors of Trade and Industrial Education and to Executive Secretaries of State Teachers Associations in the forty-eight states and the District of Columbia; law books and law reviews; books on school law; professional education journals; newspapers; state statutes; and the National Reporter System. All material was proofread by a practicing attorney at law.

Findings and Conclusions: A school district is not subject to suit unless a statute specifically makes it liable. An individual teacher is liable to suit for his torts, but negligence must be proved. Some harmless legislation and group occupational insurance have proved successful in assuring teachers financial assistance in the event of litigation. Persons in state supervisory positions apparently are not fully aware of the prevalent conditions in their respective states. Negligence has been found to be the most common reason for which a shop teacher can be held liable, and one is liable in a negligence suit only if it can be shown that the injuries to another follows without any intervening cause from the negligent, careless, or improper actions of the defendant. It was found that the best protection a shop teacher has from liability lies in the use of extreme care in all cases in which it is possible for a pupil injury to occur.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author King (Last name), Homer (First name), Parnell (Middle name)

Exact Title A HISTORY OF FEDERAL LEGISLATION RELATING TO SUB-COLLEGIATE VOCATIONAL EDUCATION FROM 1900--1933.

Degree granted Ed.D., Date 1934, No. of pages in report

Granted by University of Southern California (Name of institution) Los Angeles, California (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Covers Federal legislation from 1900--1933 and outlines in considerable detail the progress of the major and minor bills concerning vocational education.

Source of data and method of study:

Findings and Conclusions:

417

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author King (Last name), Thomas (First name), Gorden (Middle name)

Exact Title FUNDAMENTAL PROCEDURES OF RESEARCH FOR INDUSTRIAL EDUCATION.

Degree granted Ed. D., Date 1958, No. of pages in report 312

Granted by Wayne State University (Name of institution) Detroit, Michigan (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To prepare a manuscript for consideration in revision of the present syllabus on research in vocational education at Wayne, based on a documental analysis of courses of study on research procedures required of graduate industrial education students and an analysis of selected doctoral dissertations in industrial education.

Source of Data and Method of Study:

Analysis of courses of study, study outlines, handbooks, graduate school bulletins, and dissertations. Documentary analysis of course materials from 32 colleges and universities offering graduate majors or degrees in industrial education in the North Central Association area.

Findings and Conclusions:

Fifteen units of instruction thought important in preparing graduate industrial education students to conduct research at the master's level were identified. Seven predominant research types were identified from the dissertations showing an expanded use of various types of research in industrial education since Feirer's study in 1939. Seven areas of interest were identified from which problems for the dissertations had been taken. A checklist was devised for a student to use in checking the rough draft of his research before submitting it for his advisor's approval. Findings were incorporated in a manuscript for a revised syllabus on research procedures in industrial education.

418

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kini, Kulai, Harayana
(Last name) (First name) (Middle name)

Exact Title PROPOSALS FOR A PROGRAM OF VOCATIONAL EDUCATION FOR MYSORE, INDIA, BASED UPON EXPERIENCES IN MYSORE AND THE UNITED STATES OF AMERICA.

Degree granted Doctors, Date 1933, No. of pages in report ____

Granted by Columbia University New York, New York
(Name of institution) (City, State

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kinker, H., Robert
(Last name) (First name) (Middle name)

Exact Title AN AUTOMOTIVE CURRICULUM FOR THE STATE OF OHIO.

Degree granted Ed. D., Date 1949, No. of pages in report 356

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop an automotive curriculum basic to training in a vocation.

Source of data and method of study:

Survey of practices in 22 vocational schools in Ohio and 20 vocational schools outside of Ohio. All of the States in this country and Puerto Rico, Hawaii, and the District of Columbia through their State departments of education were requested to send their courses of study in Automobile Servicing and Repair for evaluation. All States responded but one. Standard flat rate and service manuals of Ford, Chevrolet and Plymouth were also used.

Findings and Conclusions:

A complete curriculum in Automotive servicing and Repair was formulated including such subjects as safe working practices, equipment and tools needed, materials needed, mathematics and science applications, blueprint reading and trade terms. Course was based upon a complete trade and job analysis. Various methods of trade analysis are explained and the author used a combination of them all.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCY COMMITTEE - ACIATE - AIAA - NAITTE

Author Kirby, Jack,
(Last name) (First name) (Middle name)

Exact Title PROBLEMS OF BEGINNING INDUSTRIAL ARTS TEACHERS IN MISSOURI WITH IMPLICATIONS FOR PREPARATORY AND IN-SERVICE TEACHER EDUCATION.

Degree granted Ed.D., Date 1965, No. of pages in report 251

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain and analyze problems encountered by beginning industrial arts teachers in Missouri. To obtain opinions of these teachers and their supervisors with regards to causes of these problems and possible solutions.

Source of Data and Method of Study:

Data for the study were obtained from interviews with 55 beginning industrial arts teachers in Missouri and their supervisors. The interviews were conducted at the schools where the teachers were employed, with the teacher interviews recorded on tapes for later analysis.

Findings and Conclusions:

1. An average of 13.3 probelms were listed by these beginning industrial arts teachers with the greatest number of them in the area of course content and instruction. Planning was another area which created problems.

2. Neither local supervision nor teacher education are providing all the information needed and expected to alleviate problems of beginning industrial arts teachers.

3. Discipline continues to be a major problem for beginning teachers that requires considerable attention and definite corrective measures.

4. Many problems of beginning industrial arts teachers stem from the economic conditions of students and school districts.

5. The colleges are adequately providing for the development of hand and machine skills.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kjos (Last name), Oscar (First name), E. (Middle name)

Exact Title OCCUPATIONAL EXPERIENCE AND SUCCESS OF DAY-TRADE VERSUS GENERAL HIGH SCHOOL GRADUATES.

Degree granted Ed.D., Date 1954, No. of pages in report 159

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To compare the occupational experiences and success of a group of day-trade school graduates of Greater Kansas City with those of a group of general high school graduates of that area, to see if there were any appreciable differences that could be attributed to their educational backgrounds. A secondary purpose was to obtain and analyze the opinions of the two groups and their employers as to the nature and effectiveness of the training received.'

Source of Data and Method of Study:

Data were obtained from the records of two general high schools and two day-trade schools, from information forms mailed to 263 general and 163 day-trade graduates, and from the employers of 69 general and 50 day-trade graduates. The two groups of graduates were compared as to: their occupational experiences since graduation from high school, their success in trade and industrial jobs, and their opinions concerning the nature and effectiveness of the industrial courses they had taken.

Findings and Conclusions:

Larger percentages of the general high school graduates participated in the professional and the clerical and sales occupational fields. Larger percentages of the day-trade graduates participated in the skilled and the semi-skilled fields. Little difference was found between the two groups in the other major occupational fields. The day-trade graduates excelled in nearly all measures of occupational success used in the study; however, the differences found were relatively small. Employers of the day-trade graduates felt that industrial courses should be broad in nature and applicable to a family of related occupations. Larger percentages of the general high school graduates stated that their shop training was of no specific advantage to them.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Klehm, Walter, Allen
(Last name) (First name) (Middle name)

Exact Title A METHOD OF DETERMINING EQUIPMENT REQUIREMENTS IN INDUSTRIAL ARTS BASED UPON TEACHING OBJECTIVES.

Degree granted Ed.D., Date 1937, No. of pages in report 362

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

After describing present procedures for determining shop equipment needs, the author proposes a new objective method. This method is then illustrated by its application to a course in woodwork and drawing. Working drawings and job plans for over two hundred woodworking and drawing projects are included.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Klein (Last name), Charles (First name), T. (Middle name)

Exact Title COURSE OF STUDY IN RELATED SCIENCE FOR BEGINNING MACHINE SHOP PRACTICE IN NATIONAL DEFENSE COURSES AND VOCATIONAL SCHOOLS.

Degree granted Ed. D., Date 1942, No. of pages in report 347

Granted by New York University School of Education (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A course of study in science related to beginning machine shop practice. A course of study to be used in trade and industrial schools in New York State and in national defense machine shop courses is suggested.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - NAITTE - AIAA

Author Kleinbach, Merlin, H.
(Last name) (First name) (Middle name)

Exact Title Physical and Biological Science Material Incorporated in Textbooks for General Shop.

Degree granted Ed. D., Date 1959 No. pages in report 151

Granted by University of Missouri Columbia, Missouri.
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain which principles of physical and biological science have application to the material taught in general shop, and to ascertain the nature and extent of the emphasis which general shop textbook material places upon the applications of those principles in the subject matter of general shop.

Source of data and method of study: Six studies in science education were used as sources of statements of principles of science. The lists were consolidated into a composite listing of 409 principles of physical and biological science. Nineteen textbooks written for students at the general shop level were analyzed for statements making application to these principles.

Findings and Conclusions: Only 147 of the 409 principles of physical and biological science had application to the material in textbooks for general shop. The area of electricity contained approximately fifty per cent of all applications and over one-fourth of the applications were found in material devoted to metalworking. In general, those books which devoted larger amounts of textual material to the area of electricity contained larger numbers of applications. Forty-nine of the 53 principles with ten or more applications were classified under three science topics -- Magnetism and Electricity; Matter, Energy and Simple Machines; and Fire and Heat. These three science topics and the topic Fluids are more closely related to the subject matter of general shop than are principles in other science topics. The electricity area of industrial arts involves more science content than other areas. The areas of metalworking and transportation also include a considerable amount of science material.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kleintjes, Paul, Leo
(Last name) (First name) (Miidle name)

Exact Title INDUSTRIAL ARTS TRANSPORTATION: THE EVALUATION, SELECTION, AND ORGANIZATION OF ACTIVITIES, PROBLEMS, AND INFORMATION ON THE SECONDARY SCHOOL LEVEL.

Degree granted Ed.D., Date 1953, No. of pages in report 211

Granted by The Pennsylvania State University University Park, Penn.
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain those activities, problems and understandings that secondary school industrial arts programs should offer to help youth meet their everyday needs and interests in modern transportation.

Source of Data and Method of Study:

Data were obtained by an activity and understanding analysis of transportation made in an industrial arts laboratory situation. These were utilized to construct a questionnaire which was sent to industrial arts teachers, parents and secondary school pupils. Periodicals and transportation equipment owners manuals were examined.

Findings and Conclusions:

The activity and understanding analysis of transportation provided a list of "Things a pupil should be able to do" and "Things a pupil should know" which could be used as a content source. The objectives of industrial arts ranged extensively. The following eight seemed to be generally acceptable: exploration, recreation, appreciation, consumer education, guidance, creative expression, social relationships, limited skills. The study indicates that on the bases of activity and understanding analysis, industrial arts objectives, and the needs and interests of pupils a functional program in transportation can be developed. The dissertation supplies the information necessary to implement these bases.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Koble, Ronald, Lamar
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF INDIVIDUAL-ORIENTED AND GROUP-ORIENTED LEARNING EXPERIENCES IN INDUSTRIAL ARTS.

Degree granted Ed. D., Date- 1963 No. of pages in report 157

Granted by The Pennsylvania State University University Park, Pennsylvania
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To evaluate experimentally the results of group-oriented and individual-oriented learning experiences in industrial arts.

Source of Data and Method of Study:

The achievement of graphic arts students in grade seven in group-oriented instruction classes was compared with the achievement of students in individual-oriented instruction classes in terms of teaching content information and perceptual motor skill. Ten classes, whose enrollment totalled 150, participated in the study. A Content Information Test and a Perceptual Motor Skill (PMS) Performance Test were constructed and used. A Sociometric Analysis was also used.

Findings and Conclusions:

An inventory indicated the learning experiences for classes taught by the same teacher were similar. Significant differences in student and teacher behavioral characteristics were found between the individual and group-oriented instruction classes. The number of student and teacher relationships, and the number of students waiting to use physical facilities differed significantly. A comparison of the pre- and post-sociometric analysis indicated group-oriented instruction classes were more homogeneous before the experiment than following the experiment. The null hypotheses cannot be rejected.

The data indicate no significant difference in the results of group-oriented learning experiences and individual-oriented learning experiences in the amount of content information learned or in the degree of perceptual motor skill developed. In this study, group-oriented learning experiences and individual-oriented learning experiences were used with equal effectiveness in the graphic arts area of industrial arts in grade seven in terms of teaching content information and perceptual motor skill.

427

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Koch (Last name), Norbert (First name), (Middle name)

Exact Title VOCATIONAL REHABILITATION IN MISSOURI, 1945-50; ITS NATURE, EXTENT, COST, AND EFFECTIVENESS.

Degree granted Ed.D., Date 1951, No. of pages in report 228

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the background, disabilities, training, earnings, and success on the job of disabled persons in Missouri for the years 1945-50, together with the cost and effectiveness of the training and other services received.

Source of Data and Method of Study:

Data were obtained from 4,860 closed case reports of the Vocational Rehabilitation Section, State Department of Education, and from 553 closed case reports of the Bureau for the Blind, State Department of Public Welfare. Employee ratings were obtained through information forms sent to employers of rehabilitated persons.

Findings and Conclusions:

A majority of rehabilitants have previous work experience. Since the educational level of rehabilitants is law, the occupational choice of most of them is limited to occupations requiring training of less than college grade. More clients are disabled by disease and congenital defects than by employment accidents. Of the clients handled by the Vocational Rehabilitation Section requiring vocational training, a majority utilize colleges, universities, or private trade schools; of those handled by the Bureau for the Blind, a majority receive sheltered workshop or home bound training. Rehabilitants are employed in a wide range of occupations, indicating that no form of employment is completely closed to them. Since rehabilitants compare favorably in job adjustment and job performance with other workers, their vocational handicaps seem to make little difference once they have been rehabilitated. The cost of rehabilitating disabled persons is more than compensated for by their increased earnings, not to mention the alleviation of dependency. The program of vocational rehabilitation has proved to be both socially and economically desirable.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Koehler, Everett, E.
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF COLLEGIATE ACHIEVEMENT BETWEEN SELECTED TECHNICAL-VOCATIONAL HIGH SCHOOL AND SELECTED GENERAL-ACADEMIC HIGH SCHOOL GRADUATES IN THE INDUSTRIAL ARTS TEACHER EDUCATION PROGRAMS IN NEW ENGLAND.

Degree granted Ph. D., Date 1959, No. of pages in report 107

Granted by University of Connecticut Storrs, Connecticut
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To reveal any significant differences in achievement between selected technical-vocational high school and selected general-academic high school graduates with respect to needed changes for: (1) the recruitment of new industrial arts education students, (2) the adjustment of industrial arts teacher education curriculums.

Source of Data and Method of Study:

Statistical comparisons between these two groups were computed in three specific areas of collegiate achievement: (1) technical education, (2) general education, and (3) professional education.

Data were taken from the personal folders of each student relative to achievement in the three areas considered. IQ ratings were used to equate the two groups. In all instances the only comparisons made were those between the achievements of both groups of students. Colleges were referred to as College A, B, C, and D.

Appropriate tests were applied to determine the variance in achievement between these two groups, using the F-test technique. Tests for variance between the two groups were made within each college, and then a similar test was applied to the total general-academic group as compared to the total technical-vocational group.

Findings and Conclusions:

It was found that the highest F-values, indicating the greatest variance, were in English, and in one college this value was high enough to be significant at the 1 percent level. The least variance was in the professional area. In the technical area there was no significant difference in achievement; the highest F-value appeared in power mechanics.

This study indicates that neither the general-academic nor the technical-vocational high school is superior in preparing students for success in this field of teacher education and that industrial arts teacher education programs should modify the English programs to include work in remedial English.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kohl, Ernest, O.
(Last name) (First name) (Middle name)

Exact Title A STUDY OF THE FACTORS WHICH INFLUENCE PUPILS TO APPLY FOR ENTRANCE AND TO CONTINUE THEIR SECONDARY EDUCATION IN THE EDWARD BOK VOCATIONAL TECHNICAL SCHOOL.

Degree granted Ed.D., Date 1949, No. of pages in report 102

Granted by University of Pennsylvania Philadelphia, Pennsylvania
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To provide criteria for the improvement of the retention of the pupils enrolled in the Edward Bok Vocational Technical School. To ascertain the effectiveness of various influences upon the pupil prior to his entrance into the school and during his training within the school.

Source of data and method of study:

Study of the records of pupils admitted to the school--school marks, attendance, interview rating profile charts, standardized and school tests. Comparison, on the basis of information available, between graduates and non-graduates. Relationship of neighborhood influences and traditions on desire to stay in school. By questionnaire, a study of factors contributing to pupil's initial application to attend the school. A study of pupil progress and retention within the school for pupils pursuing the regular program of studies as compared to adjustment program.

Findings and Conclusions:

The junior high school advisor exerted the greatest influence other than the home, ranking eighth in 24 identified influences, the counselor twelfth, shop and home room teacher fifteenth. Twelve percent of the pupils entering senior high school reported counselor help in course selection as compared to 3 percent of those selecting the vocational program. The self-appraisal program exercised but little influence as a selection device or indication of probable retention to graduation. There was improvement in pupil interest and success for adjustment pupils as compared to previous records of comparable pupils and with those in regular program.

430

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kohler, (Last name), Richard (First name), Charles (Middle name)

Exact Title ARTS ACTIVITIES INTEGRATED WITH THE TEACHING OF READING, SCIENCE, AND ARITHMETIC IN THE ELEMENTARY SCHOOL.

Degree granted Ed.D., Date 1951, No. of pages in report 222

Granted by Univeristy of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain and analyze the arts activities textbook writers recommend using on an integrated basis in the teaching of reading, science, and arithmetic at the various grade levels of the elementary school, and to present and interpret findings in a way helpful to persons interested in the preparation and advancement of elementary teachers.

Source ff Data and Method of Study:

Data were secured from an analysis of ten series of teacher's guidebooks, literature on present day practices and procedures followed in elementary schools, and literature on the use of the arts in the elementary schools.

Findings and Conclusions:

Teacher's guidebooks in reading, science, and arithmetic recommended thirty-seven different types of arts activities for integration with the teaching of these subjects in the elementary school. Thirty-four types of arts activities appeared in the teacher's reading guidebooks; twenty-five types appeared in the teachers' science guidebooks; and fourteen types appeared in the teacher's arithmetic guidebooks. The distribution of two and three-dimensional arts activities remained relatively constant through the grades for all areas of the curriculum analyzed. The frequency of appearance of the arts activities decreased as the grades in school progressed. Many types of arts activities are common to and can be integrated with the teaching in each grade of the elementary school. Many types of arts activities are and can be integrated with more than one area of the curriculum.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kohler (Last name), Roderick (First name), George (Middle name)

Exact Title STATUS AND TRENDS IN GRADUATE INDUSTRIAL TEACHER EDUCATION IN THE UNITED STATES.

Degree granted Ed.D., Date 1952, No. of pages in report 280

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the current status and trends in graduate programs in industrial teacher education in the United States, including the education of teachers of industrial arts, vocational-industrial education, and technical education.

Source of data and method of study:

Data were obtained from information blanks completed and returned by chairmen of departments of industrial education, or their representatives, of sixty-six institutions offering graduate work in industrial teacher education and from college and university catalogs and other written material furnished by participants in this study.

Findings and Conclusions:

In recent years the greatest growth in graduate programs in industrial teacher education has been in the industrial arts phase. There is a great increase in the number of graduate students majoring in industrial arts and a decrease in the number majoring in vocational-industrial education. The number of graduate degrees granted in industrial teacher education has greatly increased during the last decade. There is little consistency regarding the entrance requirements for graduate study in industrial teacher education. Many institutions allow undergraduate credit for trade experience in meeting entrance requirements for students majoring in vocational-industrial education. There is a lack of uniformity in graduate credit requirements in industrial teacher education. The minimum number of hours required for the Master's Degree in industrial education is increasing. Fewer institutions are now requiring a Master's thesis in industrial teacher education; additional course work is becoming a common substitute for the thesis. A majority of the institutions giving graduate work in industrial education allow graduate credit for shop courses to apply toward the Master's degree. There is little uniformity regarding the minimum residence requirements for the Doctor's degree with a major in industrial education. There is as wide a variation of courses and practices regarding graduate programs in industrial teacher education among institutions offering the same phases of industrial education. The majority of the staff members teaching graduate courses in industrial teacher education do not have an earned Doctor's degree.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kohram, George, E.
(Last name) (First name) (Middle name)

Exact Title AN ANALYSIS OF THE ACTIVITIES, TRAINING, AND OPINIONS OF COORDINATORS OF COOPERATIVE EDUCATION.

Degree granted Ed. D., Date 1952, No. of pages in report 214

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To analyze the activities, training, and opinions of coordinators of cooperative part-time vocational education and to ascertain what implications, if any, such activities, training, and opinions might have for the improvement of the professional education of teacher-coordinators.

Source of data and method of study:

Data for the study were gathered through information forms sent to 342 business education coordinators and 460 industrial education coordinators designated by their state supervisors. Forty-two states and territories of Hawaii and Puerto Rico were represented in the survey, with a 60 per cent return.

Findings and Conclusions:

The duties, responsibilities, and activities of coordinators of cooperative programs in business occupations are similar to the duties, responsibilities, and activities of coordinators of cooperative programs in industrial occupations except in the area of occupational analysis. Business and industrial coordinators hold similar opinions as to the importance of the activities which they perform in the organization and operation of cooperative programs. They likewise hold similar opinions as to the training needed in order to perform the various activities involved in the coordinator's job. Both groups should provide instruction in the performance of these activities. Business coordinators and industrial coordinators need essentially the same type of pre-employment and in-service vocational professional education. Both groups need more training in the area of public speaking, public relations and vocational guidance.

433

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Koonce (Last name), Tommy (First name), R. (Middle name)

Exact Title State Prepared Industrial Arts Resource Materials: Their Status, Preparation, and Effectiveness.

Degree Granted Ed. D. Date 1968 No. pages in report

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E. R. I. C. ( )

Purpose of Study: To ascertain current status of state prepared resource materials, and the process of professional interaction involved in the preparation of industrial arts resource materials published under the auspices of the state departments of education.

Source of Data and Method of Research: Data for the study were obtained from (1) the 106 resource publications currently available to the industrial arts teachers from thirty-two state departments of education, (2) an information form completed by forty-eight persons responsible for industrial arts in state departments of education, and (3) an information form completed by 1,288 industrial arts teachers selected at random from nine states. The nine states were selected on the basis of the judged quantity and quality of available resource materials in the following manner:

(a) The three states judged to have the best materials.
(b) The three states judged to have average materials.
(c) The three states that did not publish resource materials.

Findings and Conclusions: The persons responsible for industrial arts in the state departments of education realize a necessity to maintain resource materials on the state level for the industrial arts teacher. The current state prepared resource materials are not functional for direct classroom use. The publications from out-of-state departments of education are not a functional source of industrial arts resource materials for the industrial arts teacher. Commercial sources and related industrial firms are functional sources of industrial arts resource materials for the industrial arts teacher. State prepared resource materials are developed by persons who are not closely associated with industry.

434

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Krejoie (Last name), Robert (First name), V. (Middle name)

Exact Title The Relative Effect of Selected Practices and Media Upon Student Enrollment in Industrial-Technical and Engineering Technician Programs At the Junior College Level.

Degree Granted Ed. D. Date 1968 No. pages in report

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the relationships which existed between the practices and media that were used by public junior colleges to encourage student enrollment in industrial-technical and/or engineering technician programs as well as those practices and media which students believed to have been most influential in their decision to enroll in these programs.

Source of Data and Method of Study: Data for the study were obtained from seventy-nine information forms completed by the junior college personnel responsible for encouraging students to enroll in industrial-technical and/or engineering technician programs and from 757 forms completed by randomly selected first year students who were enrolled in these programs during the 1967-68 school year.

Findings and Conclusions: Drop-outs from four year colleges will be a relatively insignificant source of industrial-technical and/or engineering technician students. It is apparent that parents or guardians, counselors, teachers, relatives or other adults, graduates of the program and friends or other students will continue to be highly influential upon the decisions of students to enroll in these programs. Descriptions of employment opportunities and careers available to program graduates appeared to be influential regardless of the method by which the information was presented. Many of the reporting colleges were spending money and wasting time on certain non-productive practices and media. Information regarding career opportunities should be directed to high school and college counselors as well as teachers and staff members other than counselors. College catalogs appear to be a medium that will continue to be highly influential upon the decisions which students make regarding enrollment in these programs. Direct contact with students, either through interviews or personal letters, was frequently used by college representatives and appeared to have influenced students; however, time was a limiting factor on the number of students who could be contacted through these means.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Krempa, John, Steven
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL ARTS EDUCATION IN NEW YORK STATE, 1870 to 1965

Degree granted Ph. D., Date 1966, No. of pages in report 416

Granted by New York University New York City, New York
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To trace the development of Industrial Arts Education in New York State from time 1870 to 1965.

Source of Data and Method of Study:

Since the study was predicated on a historical research methodology, much of the data was obtained from both primary and secondary sources using interview techniques and a review of the relevant literature.

Findings and Conclusions:

The major findings of the study suggested that John Dewey, Frederick Bonser and the development of teachers College of Columbia University were influential forces in the development of industrial arts as a significant part of the general education curriculum. In more recent years, industrial arts educators have become increasingly concerned with and affected by advancements in modern technology. Recommendations were made concerning the future direction of industrial arts in New York State.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Krubeck, Floyd, Earl
(Last name) (First name) (Middle name)

Exact Title RELATION OF UNTIS TAKEN AND MARKS EARNED IN HIGH SCHOOL SUBJECTS TO ACHIEVEMENT IN THE ENGINEERING COLLEGE.

Degree granted Ed.D., Date 1954, No. of pages in report 114

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relation of the number of units taken and marks earned in high school English, mathematics, science and industrial arts to achievement in the Engineering College of the University of Missouri, and to ascertain the extent to which marks earned in each of these four high school subjects contributes to this achievement.

Source of Data and Method of Study:

Data were secured from records of the Director of Admissions; Engineering Dean's Office; Department of Educational Psychology; and Guidance Service of the University of Missouri. Undergraduate records of 429 of the 1103 engineering graduates (1949 to 1953) examined were used. Data from above sources were recorded on a data sheet, punched on IBM cards, and statistically treated.

Findings and Conclusions:

The size of the high school graduating class has little effect on whether or not students graduate from the College of Engineering. Marks earned in high school English, mathematics, science, and industrial arts have a direct significant relation to achievement in the College of Engineering, whereas the number of units taken in these subjects has very little relation to engineering achievement. Marks earned in high school mathematics was a better predictor of engineering achievement than marks earned in either English, science, or industrial arts. A higher coefficient of correlation existed between marks earned in the four high school subjects and achievement than between any one of the high school subjects and the criterion. Units taken and marks earned in the four high school subjects account for only 16 per cent of scholastic achievement in the Engineering College.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Krumbiegel, Walter, Otto
(Last name) (First name) (Middle name)

Exact Title A HISTORY OF RECENT DEVELOPMENTS IN THE ACTIVITY MOVEMENT IN THE UNITED STATES, 1900-1950.

Degree granted Ph. D., Date 1955, No. of pages in report 424

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To record developments in the activity movement in elementary education in the United States and to relate developments to the social developments of the twentieth century.

Source of data and method of study:

The historical method was employed in this study. Reports of educational theory, practice, and experimentation bearing on the growth of activity education and the activity movement were analyzed and related to the milieu.

Findings and Conclusions:

The activity movement represented an attempt to replace the traditional subject matter curriculum of the elementary school with a curriculum consisting of activities, units, experiences, themes, or centers of interest. Evidence indicated that activity education could be traced to primitive cultures. The activity movement of the twentieth century in the United States, however, stemmed from William H. Kilpatrick's project method. The data supported the view that the activity movement reflected the social developments of the twentieth century to some degree. Although educators seemed to agree on the value of including activities in the curriculum, they disagreed on the use of those activities. Some educators held that activities should be employed to teach subject matter while others contended that subject matter should be taught as called for by the activity. Experimental evidence favored the activity curriculum over the traditional curriculum. . The status of the activity movement at mid-century was not clear.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kurth, Edwin, L.
(Last name) (First name) (Middle name)

Exact Title CERTAIN DEVELOPMENTS AND TRENDS IN INDUSTRIAL ARTS TEACHER EDUCATION.

Degree granted Ed.D. Date 1955 No. of pages in report 241

Granted by University of Florida Gainesville, Florida
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain what practices and methods are considered the most effective in present day industrial arts teacher preparation and what trends educators feel will have future influence.

Source of data and method of study:

Data were obtained through a questionnaire which was sent to heads of departments and leading industrial arts educators.

Findings and Conclusions:

Increased enrollments in industrial arts in secondary schools have resulted in a greater demand for more adequately trained teachers. More effective recruitment practices must be utilized to bring qualified personnel into the profession. Facilities for preparing industrial arts teachers need attention. Various trends in philosophy and practice have been evident for some time and are still not established procedures.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Kurtz (Last name), Harmon (First name), Henry (Middle name)

Exact Title A STUDY OF THE USE OF OCCUPATIONAL INFORMATION IN SECONDARY SCHOOLS.

Degree granted Ed. D., Date 1959, No. of pages in report 207

Granted by University of California (Name of institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To survey literature and to study research on the use of occupational information in secondary schools.

Source of Data and Method of Study:

Fifty research studies dealing with the effectiveness of the occupations course, the percentage of schools offering courses in occupations and methods and materials used in disseminating occupational information were analyzed. Six California educators were interviewed regarding ten questions raised by research studies.

Findings and Conclusions:

The study indicated that secondary schools should have a well organized program for presenting occupational information and should use a variety of methods and materials. Although such information should be presented at all secondary school grade levels, a special need seemed to exist at the ninth- and twelfth-grade levels.

SOURCE SHEETS FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Lambert, James, Howard
(Last name) (First name) (Middle name)

Exact Title AN ANALYSIS OF SOME FACTORS WHICH ARE SIGNIFICANT IN THE TRAINING AND EXPERIENCE OF TEACHERS OF SHOP SUBJECTS IN VOCATIONAL INDUSTRIAL EDUCATION.

Degree granted Ph.D., Date 1940, No. of pages in report 234

Granted by Cornell University Ithaca, New York
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study investigating the background and development of industrial education=in the United States and developing criteria for the selection and training of teachers of shop subjects.

Source of Data and Method of Study:

Data was obtained from 800 teachers of shop subjects in all-day vocational industrial education classes in public secondary schools of New York State. Materials used were a questionnaire and a rating scale to obtain principals' evaluations of efficiency of teachers submitting questionnaire reports.

Findings and Conclusions:

1. Vocational practices and principles should be taught by those who are masters of these practices and principles.
2. Present teachers attained status through rather traditional factors of a) apprenticeship b) journeymanship c) teacher-training.
3. Trends
   a. Age - "poor" teachers have greatest mean age with "superior" ranking next.
   b. Apprenticeship - a larger proportion of "good" teachers served as apprentices but "poor" teachers have greater mean years served.
   c. Extra-curricular - "superior" teachers are more active, expecially in Student Council.
   d. Self-Improvement - "superior" teachers hold higher degrees, are members of trade or craft unions etc. but less efficient teachers are higher in proportion who completed correspondence study.
   e. Trade Experience - larger proportion of less efficient teachers served greater mean number of years as learners while efficient teachers, a greater proportion, served as journeymen.
   f. Attitudes Toward Teacher-Training Requirements - "poor" teachers favor "more schooling" and superior teachers exhibit a critical attitude toward present teacher-training programs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE, - ACIATE - AIAA - NAITTE

Author Land, Samuel, L.
(Last name) (First name) (Middle name)

Exact Title TRADE ASSOCIATIONS -- THEIR SERVICES TO EDUCATION.

Degree granted Doctors, Date 1931, No. of pages in report

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

442

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Landers (Last name), Frederick (First name), W. (Middle name)

Exact Title PEWTER AS MEDIUM IN INDUSTRIAL ARTS EDUCATION AND LEISURE TIME ACTIVITIES.

Degree granted ________, Date 1937, No. of pages in report _______

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Landis, Russell, Henry
(Last name) (First name) (Middle name)

Exact Title TEACHER EDUCATION PROGRAMS AND THE PREPARATION AND TEACHING POSITIONS OF INDUSTRIAL EDUCATION TEACHERS IN ILLINOIS.

Degree granted Ed.D., Date 1940, No. of pages in report 191

Granted by Pennsylvania State College State College, Pennsylvania
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

An analysis of the educational and vocational experience of 297 teachers of industrial education and farm mechanics in the State of Illinois in 1938-1939.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Lang, Edward, Hill
(Last name) (First name) (Middle name)

Exact Title THE ORGANIZATION AND ADMINISTRATION OF THE PROGRAM OF VOCATIONAL EDUCATION FOR NATIONAL DEFENSE IN NEW YORK STATE.

Degree granted Ed.D. Date 1942 No. of pages in report 385

Granted by New York University School of Education New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The development of defense training programs including instructional material and a critical discussion of the organization and administration of the defense training program. An historical survey of the legislation, current practices, and development of vocational education are discussed.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Lanman, (Last name), Richard (First name), Warren (Middle name)

Exact Title THE CONSTRUCTION OF A FORCED-CHOICE TEST FOR INDUSTRIAL TRAINERS.

Degree granted Ph. D., Date 1953, No. of pages in report 56

Granted by Purdue University (Name of institution) Lafayette, Indiana (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a generally usable rating scale for industrial trainers; to examine the way in which subordinates, peers, and superiors regard the various aspects of training behavior; and to test certain hypotheses relevant to the methodology of the forced-choice technique.

Source of Data and Method of Study:

Data were secured in the following manner: a critical behavior letter was sent to training directors in 85 different industries; a tape recorded trainers confernece was conducted at which trainers expressed ideas and opinions about trainers; and job descriptions of the work of a number of different trainers were analyzed.

Findings and Conclusions:

A forced-choice type of evaluation instrument resulted from this study which is known as the Trainer Performance Indicator with three forms: Form T, Form P, and Form I. This instrument may be used by training directors, trainers, and trainees to rate the effectiveness of the performance of trainers. The forced-choice technique of rating is used since it forces the rater to make choices which he might otherwise not have made. Validation results on ratings of trainers by superiors and peers resulted in correlations ranging between .4 and .8 for varied industries.

446

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Lapidus, George, ______
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF EDUCATION AND NON-EDUCATION STUDENTS WITH RESPECT TO THEIR CHOICE OF VOCATIONAL OBJECTIVES

Degree granted Ph.D., Date 1954, No. of pages in report 43

Granted by Iowa State College (Name of institution) Ames, Iowa (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the nature and significance of differences in various characteristics between college students who select teaching as a vocational goal and those who choose other vocational goals.

Source of Data and Method of Study:

The measurements and indices used in the group comparisons were: high school average, Brookly College entrance examination, American Counsel on Education Psychological Examination, College Grade Index, Thrustone Temperament Schedule, Minnesota Personality Scale, Minnesota Teacher Attitude Inventory, Kuder Preference Record-Vocational, Socio-Economic questionnaire. The population of study consisted of six hundred and fifty graduates. The statistical techniques used were the t-test, differences between percentages and Chi-square test.

Findings and Conclusions:

Small and educationally insignificant scholarship and intellectual differences exist among the groups. The education and non-education students reveal distinct interest preferences and vocational objectives. Relatively definite personality differences exist between the groups and the education students show richer potential for teacher-pupil relationships. Socio-economic factors are of lesser significance than the interests and personality of students in determining their selection of vocational objectives.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Lappin, Alvin, Roger
(Last name) (First name) (Middle name)

Exact Title AN EVALUATION OF PROCEDURES FOR INTRODUCING NEW MATERIALS, TOOLS AND PROCESSES IN INDUSTRIAL ARTS TEACHER EDUCATION.

Degree granted Ed. D., Date 1958, No. of pages in report 215

Granted by Wayne State University (Name of institution) Detroit, Michigan (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To investigate the effectiveness of procedures used in industrial arts teacher education to keep curriculums technologically up to date.

Source of Data and Method of Study:

A study of procedures used by 73 departmental chairmen for introducing new materials, tools, and processes into their curriculum and the procedures used by 57 selected teachers of plastics for becoming competent to teach new materials, tools, and processes. A jury of 28 departmental chairmen evaluated "principles for good practices" in keeping industrial arts teacher education technologically up to date.

Findings and Conclusions:

Instructors should be qualified to establish objectives for including new tools, materials, and processes; identify course content; select units of instruction; devise ways for teaching the units; develop evaluation procedures; identify supplies, tools, and equipment; and organize courses of study. Industrial arts teaching departments have not generally kept abreast of new technological developments. Progressive teachers in service sought sources outside of teaching to develop competency to teach newer materials, tools, and processes.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Larson, Delmar, Laverne
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL MANAGEMENT AND INDUSTRIAL ARTS: A RESOURCE RESEARCH WITH IMPLICATIONS FOR CURRICULUM DEVELOPMENT.

Degree granted Ph. D. Date 1964 No. of pages in report 327

Granted by The Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine what techniques of industrial arts laboratory organization and what industrial arts curriculum content can be derived from modern industrial management concepts and practices.

Source of Data and Method of Study:

Documentary research was employed to find the data sought. Original pieces of written matter were employed as sources of information. Use was made of industrial management references which were copyrighted since World War II and especially during the past five years. An international perspective was gained by reviewing the proceedings of the International Committee of Scientific Management which met in New York City in 1963. Recent Publications of the American Management Association were also emplored.

Findings and Conclusions:

1. One of the basic conclusions was that industrial management, as a resource, does provide curricular experiences, subject matter content, and personnel organization patterns that are continually related to the values and general objectives of industrial arts education.
2. It was concluded that management concepts should provide curriculum content for other divisions of the curriculum and not constitute a separate division of their own.
3. Industial arts should seek to develop an understanding of the key role played by industrial management on an international scale.
4. Management personnel organization plans should be patterned from industrial practice, should promote student stature and participation, in addition to promoting the smooth operation of the industrial arts laboratory.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Larson, Irving, W.
(Last name) (First name) (Middle name)

Exact Title VARIABLES INFLUENCING RECRUITING OF PROSPECTIVE INDUSTRIAL ARTS ELECTRONICS TEACHER GRADUATES

Degree granted Ed. D., Date 1969 No. of Pages in Report 286

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose was to discover variable having the greatest influence on recruiting prospective industrial arts electronics teacher graduates in industrial arts teacher educating institutions.

Source of Data and Method of Study:

Questionnaires were sent to 291 industrial arts electronics teacher educators resultir in an 80 percent return. The following statistical methods of analysis were used; correlation matrix, factor analysis varimax rotation matrix, multiple regression analysis and F tests of significance. The level of significance was set at the .10 level.

Findings and Conclusions:

One hundred-ninety respondents, as functioning members of this study, reported 1043 industrial arts majors graduated form July 1, 1967 to June 30, 1968, who were qualified to teach high school electronics. The only statistically significant result from the predictive part was: If an instructor wanted to increase the number of industrial arts electronics teacher graduates, he should help to increase the total number of industrial arts majors in the department. The following suggestions were found to be of possible value in increasing the number of industrial arts electronics teacher graduates: Recruit persons already interested in electronics from technology programs, junior colleges and high school; in addition use motivational electronics equipment. Results also showed that if one wanted to increase the percent of industrial arts electronics teacher graduates in a department, one might use electronics projects with an accompanying emphasis on the latest electronics technology. Respondents considered the project to be the most important electronics motivational area. The study considered the rise of technology programs as well, since this influenced the recruitment of industrial arts electronics teachers. Generally, technology programs were rapidly increasing in number and attracting capable students and faculty members. From 1960 to 1969 almost half of all industrial arts departments became associated with technology programs in some way. Compared to non-technology departments, technology associated departments offered more graduate electronics courses, had better equipment, did more recruiting, and had instructors who were more technically qualified. In conclusion, a department had much to gain and little to lose by beginning an association with a technology program.

450

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Larson, Milton, E.
(Last name) (First name) (Middle name)

Exact Title A STUDY OF THE CHARACTERISTICS OF STUDENTS, TEACHERS, AND THE CURRICULUM OF INDUSTRIAL-TECHNICAL EDUCATION IN THE PUBLIC COMMUNITY JUNIOR COLLEGES OF MICHIGAN.

Degree granted Ed. D., Date 1965, No. of pages in report

Granted by Michigan State University East Lansing, Michigan
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to study the characteristics of the students, teachers, and the curriculum of industrial-technical education in the public community junior colleges of Michigan.

Source of Data and Method of Study:

The information gained through this study was secured from three main sources. The data relative to teachers was obtained from the files of the office of the Superintendent of Public Instruction. Information concerning the curricula was secured by an analysis of the contents of the catalogs and brochures of the colleges. A detailed follow-up study was made of all students who initially enrolled in industrial-technical curricula during the school year 1958-59.

Findings and Conclusions:

1. One-half of the instructors had earned the master's degree.
2. Twenty-one of the 138 instructors had completed an apprenticeship.
3. Industrial-technical curricula were listed by each of 13 different public community junior colleges in Michigan.
4. The most common curriculum was drafting technology while the least frequently listed curricula were architecture, body drafting and industrial management technology.
5. The most common admission requirement was graduation from high school.
6. Seventy-four percent of the students were under the age of 21.
7. Thirty-four percent of the students indicated less that 3 semesters of full-time college work.
8. Nineteen percent believed the courses were too general and 27 percent thought that a two-year program was too short.
9. Eighty-three percent were of the opinion that the community junior college offered a good environment in which to study and learn.
10. One hundred one students graduated from the industrial-technical curricula of the Michigan public community junior colleges.

451

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Larson, Raymond, H.
(Last name) (First name) (Middle name)

Exact Title SUCCESS PATTERNS IN INDUSTRIAL EDUCATION.

Degree granted Ph.D., Date 1951, No. of pages in report 299

Granted by University of Minnesota Minneapolis, Minnesota
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of study:

To gather, organize, and present data pertinent to questions concerning graduates of the Industrial Education Department, University of Minnesota.

Source of data and method of study:

Data were obtained from college transcripts of credits, recommendations, test scores, admission records, and a questionnaire.

Findings and Conclusions:

First degree graduates were weakest in academic areas, especially mathematics and science. Students native to the University are weaker than those who transferred tito the College of Education. Those graduating with distinction are predominantly transfer students. The undergraduate records of those with first degrees other than in the College of Education compare favorably with the undergraduate records of those of the first degree recipients who later attained the second degree.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Laws, Norman, G.
(Last name) (First name) (Middle name)

Exact Title MATHEMATICAL NEEDS OF TECHNICIANS IN SELECTED MICHIGAN INDUSTRIES

Degree granted Ed.D. ; Date 1966 No. of pages in report 245

Granted by Wayne State University Detroit, Michigan
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the common core of mathematical skills currently required by each type of technician in Michigan and to project these as requirements for the 1970's.

Source of Data and Method of Study:

Management personnel were interviewed in 71 industries employing technicians. Mathematics utilization data were obtained from senior technicians.

Findings and Conclusions:

There is a common core of basic skills in mathematics required for all technicians. Currently the level of proficiency ranges from arithmetic through trionometry of the right triangle.

Suggestions were included for organizing and teaching a technical mathematics course.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Lean, Arthur, Edward
(Last name) (First name) (Middle name)

Exact Title THE ORGANIZATION OF POST HIGH SCHOOL EDUCATION IN FLINT, MICHIGAN.

Degree granted Ph.D., Date 1948, No. of pages in report 184

Granted by University of Michigan Ann Arbor, Michigan
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A socio-educational study emphasizing enrollment and curricular aspects of post high school education in the city of Flint and Genesee County. Considers preparatory and terminal needs as well as general education for older youth and adults.

Source of data and method of study:

Information not available.

Findings and Conclusions:

Information not available.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NIATTE

Author Leffard, Warren, Lee
(Last name) (First name) (Middle name)

Exact Title Employment Opportunities and Training Needs for Technicians in Metalworking Manufacturing Industries of the Central Ohio Valley with Projections Through 1975.

Degree Granted Ed. D. Date 1968 No. pages in report

Granted by University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) (E.R.I.C. ( )

Purpose of Study: The purposes of this study were to ascertain the status of technician training and the needs of industry for technicians in the metalworking manufacturing industries of the Central Ohio Valley. The Central Ohio Valley was defined as the Standard Metropolitan Statistical Areas of Louisville, Kentucky and Cincinnati, Ohio.

Source of Data and Method of Research: Personal interviews were conducted with representatives of 99 industrial firms that were randomly selected as the sample population from a total population of 868 metalworking firms in the Central Ohio Valley. Only 36 of the 99 firms interviewed employed technicians at the time or planned to employ them by 1975. Information forms were sent to 170 educational institutions in the states of Illinois, Indiana, Kentucky, Ohio, Tennessee and West Virginia, which were identified as having less than baccalaureate degree level programs underway or were so designated by title as being likely possibilities for having them. One-hundred sixteen responses were received of which 109 were useable.

Findings and Conclusions: Schools in the "local" area should provide a more comprehensive group of technician training programs. Broad variations exist in the qualifications established by industry for technicians. Programs modeled after Speed Scientific School and Ohio College of Applied Science would provide adequately trained technicians. Programs in areas other than "Electronic Engineering" would provide graduates with greater employment possibilities in the "local" area. The quantity of technicians availability from educational sources is not adequate. Enrollments in the institutions in the "local" area are not completely attuned to the needs of industry.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Lemaster, Lelan, Kenneth
(Last name) (First name) (Middle name)

Exact Title FILMED DEMONSTRATIONS WITH MANUAL CLASS DEMONSTRATIONS VS. CONVENTIONAL DEMONSTRATIONS IN INTRODICTORY WOODWORK.

Degree granted Ed. D. Date 1961 No. of pages in report

Granted by The Pennsylvania State University University Park, Pennsylvania
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the effect of pupil learning of specially prepared filmed demonstrations of selected teaching units in introductory woodworking when presented to the class before the manipulative skill was performed by the instructor.

Source of Data and Method of Study:

The experimental method employing the experimental-control group technique was used to collect data for this study. Schools were selected that offered at least two classes of introductory woodworking taught by the same instructor. Twenty selected demonstrations based upon student attainments as defined by the Texas Education Agency were submitted to a jury of twelve industrial arts teachers. Eight demonstrations were selected for filming.

Findings and Conclusions:

In the teaching of introductory woodworking to boys on the junior high school level, keeping in mind that the competencies measured were: (1) the mastery of related technical knowledge, (2) the ability of the pupils to perform manipulative skills, and(3) the number of manual demonstrations performed by the class instructor, the study revealed significant and important advantages in favor of the filmed demonstrations used to introduce the appropriate manual demonstration. In mastery of related technical knowledge the experimental classes consistently showed larger increments in learning. A summation of "t" ratios for individual demonstrations did. The null hypothesis was rejected at the .05 level of significance for individual demonstrations.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Lemons (Last name), Clifton (First name), Dale (Middle name)

Exact Title AN INVESTIGATION OF RELATIONSHIPS BETWEEN MECHANICAL DRAWING EXPERIENCE, CERTAIN MEASURES OF ACADEMIC ABILITY AND KNOWLEDGE OF DRAWING FUNDAMENTALS TO DETERMINE CRITERIA FOR ASSIGNING STUDENTS TO ACCELERATED SECTIONS OF ENGINEERING DRAWING.

Degree granted Ed. D. ,Date 1965 ,No. of pages in report ____

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To identify criteria for assigning students to accelerated sections of engineering drawing.

Source of Data and Method of Study:

A total of 788 students enrolled in two schools were measured on: (a) knowledge of drawing (b) academic ability and (c) mechnical drawing experience. Multiple linear regression and multiple discriminant analyses were used to determine the relationship among variables and to identify variables which could accurately predict "success" in drafting.

Findings and Conclusions:

The findings supported the conclusions that (1) two semesters of high school drafting was a necessary prerequisite assignment fo accelerated drafting courses, (2) drafting experience alone was not sufficient to be moved into accelerated drafting courses and (3) the number of semesters of high school drafting was the single, best criteria for selecting students for accelerated courses. In general, the findings suggest that high school drafting programs can be helpful to students planning to specialize the area of engineering drafting.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Leonard (Last name), Regis (First name), L. (Middle name)

Exact Title EXPERIENCES OF CERTAIN VOCATIONAL HIGH SCHOOL GRADUATES IN OCCUPATIONAL AFFILIATION.

Degree granted Ph.D., Date 1950, No. of pages in report 199

Granted by University of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C ( )

Purpose of Study:

To discover the occupational affiliation of a graduating class of vocational high school students who had completed at least 2 years of school trade training.

Source of data and method of study:

The information secured by means of interviews.

Findings and Conclusions:

One hundred twenty-three of the 133 graduates of Pittsburgh vocational high schools were located. Only those completing at least 2 years of trade training in bricklaying, electricity, machine shop, plumbing, printing or wood shop were included in the original number selected. Less than one-half of the graduates obtained employment in the field for which thet were trained. Many of the remainder took jobs in non-related fields or were unable to secure employment. The author of the study recommends a more careful downward and upward guidance to secure better placement. A more positive approach for placement and follow-up, by the schools, is needed to replace the trial and error basis so commonly found.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Lester, Seelig, Lester
(Last name) (First name) (Middle name)

Exact Title A MANUAL FOR USE IN SUPERVISION OF VOCATIONAL INDUSTRIAL EDUCATION

Degree granted Ed. D., Date 1944, No. of pages in report 292

Granted by New York University School of Education New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A series of operating procedures for supervisors in the field of vocational and industrial education. The conclusions are validated by the jury method.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Levenson, William, B.
(Last name) (First name) (Middle name)

Exact Title THE TRAINING OF RADIO PERSONNEL: AN ANALYTICAL APPROACH.

Degree granted Doctors, Date 1937, No. of pages in report ____

Granted by Western Reserve University Cleveland, Ohio
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Lichtblau (Last name), Leonard (First name), Robert (Middle name)

Exact Title SLIDES FOR PERCEPTUAL-MOTOR SKILLS

Degree granted Ph. D., Date 1958, No. of pages in report

Granted by New York University (Name of Institution) New York City, New York (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the influence of each of several factors on the effectiveness of a set of slides designed to teach perceptual motor skills to junior high school students.

Source of Data and Method of Study:

Seven groups of seventh grade junior high school boys and girls, equated for reading and mechanical aptitude, were used to experimentally determine the effectiveness of six instructional variables used with the slide series. The quality of the criterion task performed by each student (setting a rivet) was rated by three metalworking teachers.

Findings and Conclusions:

The findings of the study suggest that only one of the six experimental instructional factors was differentially related to performance. The major conclusion of the study was, therefore, that when using slides to teach the application of a perceptual motor skill, detailed explanations of why certain procedures should be followed, can be eliminated from the lesson.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Lindahl, (Last name), Lawrence (First name), Gaylerd (Middle name)

Exact Title MOVEMENT ANALYSIS AS AN INDUSTRIAL TRAINING METHOD.

Degree granted Ph.D., Date 1944, No. of pages in report 87

Granted by Purdue University (Name of institution) Lafayette, Indiana (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An analysis of the foot movement on an abrasive cut-off operation through paper tape tracings with a pen connected to the machines. A training program based on this analysis was developed and the results are recorded.

Source of Data and Method of Study:

Information not available.

Findings and Conclusions:

Information not available.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Lindbeck (Last name), John (First name), Robert (Middle name)

Exact Title A FRAME FOR RESEARCH IN INDUSTRIAL ARTS.

Degree granted Ph. D., Date 1958, No. of pages in report 165

Granted by University of Minnesota (Name of institution) Minneapolis, Minnesota (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To discover the derivation and nature of the generalizations made for the field of industrial arts and to establish a framework for industrial arts research using this information and keeping within the methods of science.

Source of Data and Method of Study:

A review of literature was undertaken to reveal any frequency patterns with respect to claims made for industrial arts. From the frequency pattern a master list of generalizations or claims was derived.

Findings and Conclusions:

There is a dearth of factual evidence to support the claims made for industrial arts. Many such claims are based upon years of experience and therefore of immeasurable value, although evidence other than opinion was found to be negligible.

Because of the trend in scientific procedures toward adjudging a hypothesis a theory only after it has undergone a validation process, it follows that there are at present no theories of industrial arts, per se. The claims made for this field merely constitute, at best, a set of calculated guesses or working hypotheses which are yet to be verified.

An examination of research studies disclosed that the majority were of the survey type, which, though of value in the total research picture, do not lend themselves to the verification of hypotheses as well as experimental research.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Linnick, Ida,
(Last name) (First name) (Middle name)

Exact Title EFFECT OF INSTRUCTIONS AND RESULTING VOCATIONAL CLASSIFICATIONS ON A VOCATIONAL INTEREST INVENTORY AS RELATED TO RESPONSE PATTERNS OF COLLEGE WOMEN.

Degree granted Ph.D., Date 1949, No. of pages in report 150

Granted by New York University New York, New York
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To study effects of the alteration of directions on responses on a vocational interest inventory test.

Source of Data and Method of Study:

One hundred twenty female undergraduates were used in an attempt to see if changing the instructions on a test will change results and also change the classification of different individuals.

Findings and Conclusions:

Instructions do play a part in the responses elicited. Response patterns tend to influence resulting occupational classifications.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Little (Last name), Richard (First name), Lee (Middle name)

Exact Title A DESCRIPTIVE STUDY OF SELECTED TECHNICAL MANPOWER NEEDS OF THE FOUNDRY INDUSTRY, WITH IMPLICATIONS FOR HIGHER EDUCATION

Degree granted Ed. D. Date 1968 No. of pages in report 109

Granted by Arizona State University (Name of institution) Flagstaff, Arizona (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine what items of study in the five instructional content areas of foundry, related foundry, mathematics, science, and business are considered desirable in the education of foundry technical personnel; to identify the technical manpower needs and determine whether these needs can be met by higher education.

Source of Data and Method of Study:

The commercial foundries that were in operation on April 1, 1967, were identified; and a stratified random sample of this population was selected. Each of 357 foundries of the selected sample was sent three questionnaires; an engineering, technical, and management person were requested to complete and return the questionnaire. The data were analyzed by statistical methods.

Findings and Conclusions:

1. The values assigned to the course and concepts in all five instructional content areas varied with the size of the company of the respondents and the company position of the respondents.
2. There was significant agreement about the values assigned to the twenty-seven course and concept items which were rated as valuable and desirable in the education of foundry technical personnel.
3. There was no significant agreement among personnel concerning the order of importance of the five instructional content areas, although disagreements existed only with the importance assigned to mathematics and science.
4. It was determined that the technical manpower needs of the foundry industry will increase dramatically by 1970; that the present sources of recruitment and sources of education of foundry technical personnel are not meeting the needs of the foundry industry.
5. The major reasons for diffiuclty in filling technical manpower needs is lack of knowledge about the occupation and lack of trained personnel.
6. The reported insufficient number of competently trained personnel could be corrected by higher education's providing more counseling services about technical careers and by its establishing foundry technology programs in the industrial arts, vocational, and technical educatin departments.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Littrell (Last name), Joseph (First name), J. (Middle name)

Exact Title EMPLOYMENT REQUIREMENTS AND OPPORTUNITIES FOR WOMEN AS TECHNICIANS IN THE ST. LOUIS LABOR MARKET AREA.

Degree granted Ed. D., Date 1958, No. of pages in report 138

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the occupations in which women were working as technicians in the St. Louis labor market area and the requirements and opportunities for employment.

Source of Data and Method of Study:

431 establishments having over 100 employees were contacted in the St. Louis metropolitan area to ascertain whether or not women were employed as technicians. Persons familiar with employment requirements and opportunities for technicians were interviewed in 67 establishments employing women technicians.

Findings and Conclusions:

While only a few of the large employers of labor in the St. Louis metropolitan area hire women technicians, it is anticipated that there will be approximately a 14-percent increase in the technical positions during the next 3 years and another 10-percent increase of personnel will be needed to replace present technical employees who are expected to leave their jobs. Women will find the best opportunities for employment in the large establishments as chemist assistants, detailers, medical technicians, engineering assistants and production illustrators. Employers preferred to hire younger women who were technical institute graduates or had some college training in mathematics, chemistry, physics, or drafting. Race, marital status, and previous work experience were not important factors in the employment of women technicians. There was a wide range of starting salaries for women technicians, with a median starting salary of over $275 per month.

466

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ljostad, Rodney, Allen
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL ARTS ACTIVITIES IN THE ENRICHMENT OF SCIENCE EXPERIENCES FOR ELEMENTARY SCHOOLS (with) PART II: THE GUIDE, ILLUSTRATIONS BY BETTY E. LJOSTAD.

Degree granted Ed. D., Date 1965, No. of pages in report 89

Granted by New York University New York City, New York
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To construct a guide for teachers suggesting industrial arts activities to enrich the teaching of science in the elementary schools. Part I dealt with research; Part II dealt with producing the guide.

Source of Data and Method of Study:

A list of objectives for both elementary school industrial arts and science was made from a review of literature and was given to a panel of experts for final approval. Subject matter content supporting each objective was identified by analyzing recommended textbooks and courses of studies from five schools. A classification system was developed for the content and the basis for writing the guide was determined.

Findings and Conclusions:

The guide consists of thirty carefully selected projects which integrates industrial arts with the content of elementary school science. The guide is organized from simple to complex projects which are appropriate for use with individuals, small groups or whole classes. While a test of effectiveness for the guide was beyond the scope of this study, it was concluded that the guide did represent an attempt to enrich the content of industrial arts by integrating basic concepts of science.

467

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Lloyd (Last name), Clifford (First name), J. (Middle name)

Exact Title Utilization of Constructional Activities in the Elementary Classroom By Graduates of the University of Missouri - Columbia.

Degree Granted Ed. D. Date No. pages in report

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To (1) ascertain the background experiences and status of those elementary and special education teachers who graduated from the University of Missouri-Columbia from January, 1963, to August, 1966, (2) ascertain the extent to which responding teachers utilized constructional programs under their direction, (3) ascertain the extent to which responding teachers who had experienced differing patterns of preparation utilized constructional activities in the instructional programs under their direction, and (4) to provide an information base from which school authorities may alter educational programs to utilize constructional activities more effectively in the elementary schools.

Source of Data and Method of Research: Data for the study were obtained from two sources: (1) permanent records of graduates in the Office of the Dean of the College of Education of the University of Missouri-Columbia, and (2) a survey instrument sent to graduates of the University of Missouri-Columbia who majored in elementary and special education.

Findings and Conclusions: (1) Elementary and special education teachers are inadequately prepared to implement certain phases of a constructional activity program. Therefore, prospective teachers must have experiences at the undergraduate level which will lead to increased capabilities to perform manipulative activities with tools and equipment and increased knowledge of content related to tools and equipment. (2) Inasmuch as the respondents who had not experienced specialized preparation or indirect course experiences performed less manipulative activities and utilized fewer materials in their program of constructional activities, it appears that a preparation pattern providing both specialized preparation and indirect experiences would result in the utilization of an increased number of manipulative activities and materials in a constructional activity program by future graduates. (3) Respondents at all levels indicated a lack of inadequate supply of most tools and equipment which limits the use of constructional activities by graduates. (4) Respondents who experienced both specialized preparation and indirect experiences were more adequately prepared in the application of constructional activities than those who were not prepared in both of these areas.

468

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Loats, Henry, Andrew
(Last name) (First name) (Middle name)

Exact Title A PROGRAM OF INDUSTRIAL ARTS FOR THE PREPARATION OF ELEMENTARY TEACHERS, BALL STATE TEACHERS COLLEGE.

Degree granted Ph. D., Date 1950, No. of pages in report 238

Granted by The Ohio State University Columbus, Ohio
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine what course offerings would best serve Ball State Teachers College in preparation of elementary teachers in so far as the industrial arts background was concerned.

Source of Data and Method of Study:

A study of the historical background for philosophy was made. The data regarding industrial arts activities for elementary schools were obtained through the questionnaire technique. Analysis of the industrial arts offering at Ball State was made.

Findings and Conclusions:

The medium most worked in was paper. Group activity units involving the construction of sand tables scenes are stressed most while group activities involving the use of industrial processes are stressed least. A lack of supplies and materials and a lack of classroom space are the hindrances encountered most. Using a wider variety of materials is needed. Workshops are the types of industrial arts in-service training needed most.

469

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Locke (Last name), Lewis (First name), A. (Middle name)

Exact Title A LICENSING PROGRAM FOR OPERATORS OF TWO-WHEELED MOTOR VEHICLES

Degree Granted ____ Date ____ No. of pages in report ____

Granted by Texas A&M University (Name of institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop and evaluate a licensing program for operators of two-wheeled motor vehicles.

Source of Data and Method of Study:

The specific materials developed were: 1) a driver's handbook, 2) two forms of a written test, 3) an off-street driving test, and 4) a driving range. The preliminary research materials were put into use January 1, 1968, and were the basis of the separate operator's license issued to motorcyclists in Texas. The program was evaluated by an advisory jury of persons prominent in traffic safety and motorcycling. The off-street driving test and the driving range design were evaluated by interviews with motorcycle riders and personnel of the Texas Department of Public Safety. The lecensing materials were revised and distributed to all licensing offices in Texas and to the advisory jury. Interviews with driver licensing personnel were conducted throughout the state to determine the ease of administering the examination.

Findings and Conclusions:

The majority of the advisory jury suggested no further changes to the handbook. The majority of the driver licensing personnel interviewed believed the handbook to be adequate. The two forms of the written test were essentially equal in difficulty, the scoring error was reduced, and the reliability was not significantly changed. The difficulty of the off-street driving test was decreased, and the maneuvers performed in the revised test were more representative of those required in riding in traffic. The driving range design was simplified and made easier to set up by the revision.

470

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Lockette (Last name), Rutherford (First name), E. (Middle name)

Exact Title THE EFFECT OF LEVEL OF ASPIRATION UPON THE LEARNING OF SKILLS.

Degree granted Ed. D., Date 1956, No. of pages in report 88

Granted by University of Illinois (Name of institution) Urbana, Illinois (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the effects of realistic or unrealistic levels of aspiration.

Source of Data and Method of Study:

Experimental treatment was designed to induce realistic levels of aspiration in two groups and unrealistic levels of aspiration in two groups. The fifth group served as control. Subjects employed were 11th- and 12th-grade students. It was hypothesized that realistic subjects would (1) be better satisfied, (2) achieve the task more successfully, (3) make more specific judgments relative to improvement needs, and (4) be more confident of their ability to improve. Appropriate statistics were employed to test the data. The level of confidence was set at 0.05.

Findings and Conclusions:

Subjects treated realistically were found to set lower goals, experience greater satisfaction, perform more efficiently in terms of performance scores and in the proportion of possible improvement made, and be more specific relative to their improvement needs. There was insufficient evidence to support the hypothesis that realistic subjects are more confident of their ability to improve.

Generally, methods which induce subjects to set realistic levels of aspiration are superior to those which induce subjects to set unrealistic levels of aspiration.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Logue (Last name), Jay (First name), Lawrence (Middle name)

Exact Title A FOLLOW-UP OF ENGINEERING GRADUATES, UNIVERSITY OF MISSOURI, 1946-1955.

Degree granted Ed. D., Date 1959, No. of pages in report 160

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain (1) the various types of positions held by the graduates of the College of Engineering, (2) the extent to which the education they received was meeting their needs, and (3) to make suggestions for improvements. (4) Further, the study sought to obtain the respondents' evaluation of the importance of drafting as a part of the engineering curriculum.

Source of Data and Method of Study:

Records of the engineering dean's office and information forms completed by 778 of the 1,598 graduates of the College of Engineering. Percentage tables were used in handling the data.

Findings and Conclusions:

It appears that a large percentage of the graduates lack proper guidance in the selection of nonengineering courses. Graduates should have a greater opportunity for participation in actual engineering problems in practical experiments while in college. Insofar as scholastic success is concerned, it makes little difference whether a student completes all the requirements for the bachelor's degree at the University of Missouri or transfers credit from another school. There is a need for additional training in public speaking and in technical English. There is no need for a foreign language requirement in the College of Engineering. There appears to be a definite trend in engineering practice for greater emphasis upon fundamentals of drafting. There is a need for a unified course in drafting which will emphasize the more valuable units of engineering drawing and descriptive geometry.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author London (Last name), Hoyt (First name), H. (Middle name)

Exact Title WRITTEN INSTRUCTION IN INDUSTRIAL ARTS TEACHING: AN EXPERIMENTAL COMPARISON OF THE JOB-SHEET AND THE OPERATION-SHEET METHODS.

Degree granted Ph. D., Date 1934, No. of pages in report 333

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A comparison of two methods of teaching shop work, including measurements of outcomes in terms of informational achievement, quality of work done, ability to analyze and plan, economy in use of materials, ease of handling groups, and student attitude toward methods used.

Source of data and method of study:

The population for the experimental study was two hindred and our seventh grade boys. They were divided into a control group of two classes each. They were pre-tested for equating and controlling. The experimental group was taught using the job sheet or operation sheet approach while the traditional used the oral-instruction-demonstration teaching. Ten related outcomes were used as criteria for testing.

Findings and Conclusions:

The job sheet method is superior in teaching technical and related information. The operation sheet and the traditional rank about even in this area. For achieving better quality the job sheet and the traditional rank about even and both are superior to operation-sheet. In skill development the job sheet ranks higher. The job sheet and traditional method are about equal in developing ability to tead working drawings. No appreciable difference in developing ability to analyze and plan problems. Job sheet gets more work done by the group. In attitudes the job sheet ranked first, the operation sheet second and the traditional method third.

473

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Loughlin, (Last name), Richard (First name), Lawrence (Middle name)

Exact Title AN HISTORICAL STUDY OF CONVALESCENT RECONDITIONING AND REHABILITATION IN UNITED STATES ARMY HOSPITALS.

Degree granted Ph. D., Date 1948, No. of pages in report 328

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To trace the various aspects of the convalescent reconditioning program in the United States Army Service Forces Hospitals back to their initial appearance in the annals of military medicine in this country; and, to discover the relationship between convalescent reconditioning and rehabilitation activities in the United States Army Hospitals prior to World War II, and the convalescent reconditioning programs in the United States Army Service Forces Hospitals during World War II.

Source of data and method of study:

Analysis of pertinent official documents such as: War Department Technical Manuals, Armed Service Forces Circulars, and other Army Service sources. Numerous civilian publications on rehabilitation and reconditioning, personal interviews, investigations, and field trips are utilized on a procedural basis for the collection of data and resultant interpretation.

Findings and Conclusions:

Various aspects of the reconditioning program of World War II made their initial appearance in the annals of military medicine of World War I. A letter from the President made a policy shift during World War II to a more successful return of the recuperative to civilian life. Subjective evidence supports the belief that military training within the convalescent reconditioning program is good in all areas of return. "Commercial Therapy" in Army hospitals, despite its psychology and vocational values, has several drawbacks not to be found in industrial or work therapy with prescribed occupational therapy. Physical reconditioning shortened the period of convalescence, educational retraining fell short of its goal, and occupational therapy established itself as an essential element of medical-military convalescent care in World War II. The claims of convalescent reconditioning as an effective therapeutic adjunct to routine medical treatment cannot be substained by scientific verification because of lack of acceptable statistical data. Although pensions and cash bonuses were awarded to United States GI's as early as 1636 (sic) no medico-military program for reconditioning and rehabilitating convalescent soldiers was evoked until World War I.

474

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Low (Last name), Fred (First name), G. (Middle name)

Exact Title A STUDY OF INDUSTRIAL ARTS SKILLS AND TEACHING TECHNIQUES AS APPRAISED BY ELEMENTARY TEACHERS, COMPARED TO THOSE TAUGHT BY CALIFORNIA COLLEGES.

Degree granted Ed. D., Date 1963, No. of pages in report 89

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To determine whether industrial arts skills and teaching techniques desired by elementary classroom teachers employed in California were comparable to industrial arts skills and teaching techniques taught by California state colleges in classes for elementary teachers in training.

Source of Data and Method of Study:

A questionnaire was developed to investigate certain industrial arts skills and techniques. An appraisal of questionnaire items was sought from a random stratified sample of 217 elementary teachers, grades kindergarten through sixth, in Kern County, California. Conclusions were drawn comparing the industrial arts skills and teaching techniques desired by elementary teachers and industrial arts skills and teaching techniques taught in California colleges. The results of the findings of the study were summarized and recommendations were made to the California state Colleges.

Findings and Conclusions:

1. Teachers in training should have an opportunity for experience in industrial arts activities so as to gain a familiarity through personal use.
2. Teachers in training should have an opportunity to observe an elementary class engaged in an industrial arts activity being taught by an experienced teacher.
3. Teachers in training should be required to take a minimum of one industrial arts class designed especially for elementary credential candidates.

475

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Lowenstein (Last name), Norman (First name), (Middle name)

Exact Title THE EFFECT OF AN OCCUPATIONS COURSE IN HIGH SCHOOL ON ADJUSTMENT TO COLLEGE DURING THE FRESHMAN YEAR.

Degree granted Ph.D., Date 1955, No. of pages in report 95

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To compare an experimental group of college-preparatory students who took an occupations course with a control group of similar students who had not taken the occupations course.

Source of data and method of study:

Data were obtained by personal interview and examination of students' college transcripts for their freshman year.

Findings and Conclusions:

Students in the experimental group achieved a higher average honor point ratio and participated in more extra-curricular activities during the freshman year.
A much higher percentage of the experimental group indicated they had based their vocational decisions on information received from people in the various fields rather than upon the advice of parents or close relatives. The occupations courses enabled the students in the experimental group to make a better adjustment to college during their freshman year than had they not had the course.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Luce (Last name), Lawrence (First name), Winston (Middle name)

Exact Title HISTORY OF INDUSTRIAL ARTS EDUCATION IN THE SAN DIEGO CITY SCHOOLS.

Degree granted Ed. D., Date 1957, No. of pages in report 454

Granted by University of California (Name of institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To trace the history of industrial arts education in San Diego.

Source of Data and Method of Study:

General historical method was used. Primary information was obtained from 18 volumes of school board records, from school publication of reports, courses of study, newspaper files, and various other public records.

Findings and Conclusions:

The history traces the growth of shopwork in San Diego schools through phases of manual training into the present comprehensive program of industrial arts education.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Luck (Last name), William (First name), Ernest (Middle name)

Exact Title AN EXPERIMENTAL COMPARISON OF DIRECT-AND-DETAILED METHOD AND DIRECTED-DISCOVERY METHOD OF TEACHING SELECTED AUTOMOTIVE TOPICS TO SENIOR HIGH SCHOOL INDUSTRIAL ARTS STUDENTS.

Degree granted Ed. D. Date 1966 No. of pages in report 216

Granted by Oklahoma State University (Name of institution) Stillwater, Oklahoma (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This study is concerned with an attempt to compare the relative efficiency of two methods of instruction. One method, called directed-discovery, places considerable responsibility upon the learner while the other is teacher oriented.

Source of Data and Method of Study:

The subjects were equated on three mental ability levels and assigned to one of three treatment groups. TREATMENT A - (direct-and detailed) and TREATMENT B (directed-discovery) received 110 minutes of instruction in each of the two methods under investigation. Those subjects in TREATMENT C (control group) received no insturction. All three treatment groups were administered two objective type tests following instruction.

Findings and Conclusions:

1. There were no significant differences found betweeen the direct-and-detailed and the directed-discovery methods on any of the three levels of intellignece for initial learning.
2. There were no significant differences found between the two methods on any of the three levels of intellignece for transfer of learning.
3. In terms of mean difference between initial learning and transfer of learning on all three intelligence levels, there was found to be no significant difference on any of the three intelligance levels.

- Apparently the lower intelligence level students were not handicapped by the directed-discovery method and perhaps they profited by the time pauses which were characteristic of this method.

-In the case of the higher intelligence level student, the directed-discovery method appears to offer a challenge which is not found in the other method. In addition, this method may also reduce the monotony which may accompany the direct-and-detailed method.

-Although the directed-discovery method has often been criticized for requiring more time to teach than the other methods do, the present study, as well as those summarized in the research of literature, involve equal amounts of time for the presentation of both techniques. Since all but one of the studies found in the review show that the directed-discovery method has the greater gains, the criticism of this method concerned with time seems to be questionable.

478

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Ludington, John, Robert
(Last name) (First name) (Middle name)

Exact Title INDUSTRY AND EDUCATION--A STUDY OF CERTAIN POLICIES AND PRACTICES OF ORGANIZED AMERICAN INDUSTRY WITH IMPLICATIONS FOR EDUCATION.

Degree granted Ph.D., Date 1940, No. of pages in report 236

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the interrelations of social forces and social institutions to determine the extent to which organized industry is interested in American public education. The role of public education in an industrial society is considered.

Source of Data and Method of Study:

The data were obtained from interviews and pamphlets from business and industry.

Findings and Conclusions:

1. The values and ideals which now serve as guides in political, economic, industrial, and educational relationships are inconsistent and in some instances conflicting.
2. Business and industrial interests have operated through every known channel of communication in an attempt to perpetuate their interests.
3. Organized industrial interests have always been powerful forces seeking control of public programs of education.
4. Education must be more concerned with ideals and values as goals for individual behavior and institutional relationships.
5. Industrial and social progress are dependent upon education.

Ob

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Lundy, Lyndall, L.
(Last name) (First name) (Middle name)

Exact Title PROGRAMED BOOKLETS COMPARED WITH SOUND FILMSTRIPS IN TEACHING AUTOMOTIVE ELECTRICITY.

Degree granted Ed. D., Date 1968 No. of pages in report

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To compare the relative effectiveness of linear programmed instruction and sound filmstrips for teaching automotive electricity.

Source of Data and Method of Study:

The experimental design was used with a group of 166 freshman college boys who were randomly assigned to one of two treatments and a control group. The effectiveness of the methods were determined by (a) pretest scores (b) unit test scores (3) retention test scores and (4) questionnaire responses.

Findings and Conclusions:

The findings supported the following conclusions: (a) linear programmed booklets were superior to sound film strips in terms of initial learning. (b) there was no difference between the two methods as measured by tests of retention and unit test scores. In general, the findings suggest that programmed instruction facilitates achievement more so than sound filmstrip types of presentations.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Lux, Donald, G.
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL COOPERATIVE VOCATIONAL TEACHER EDUCATION WITH SPECIAL REFERENCE TO THE PROJECTION OF A PROGRAM IN THE STATE OF ILLINOIS.

Degree granted Ph.D., Date 1955, No. of pages in report 225

Granted by The Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a program of cooperative vocational teacher education for the State of Illinois.

Source of Data and Method of Study:

Data were obtained through extensive travel and consultation with officials in cooperative programs in five states.

Findings and Conclusions:

The University of Illinois, legally designated trade and industrial teacher education agency for the state, should institute the proposed program. The secondary schools should provide further pre-employment trade and industrial training. Professional leadership should develop programs which combine the basic elements of a teacher education program: general, professional, and technical. State departments of education should reevaluate their certification requirements for trade and industrial teachers in the light of evolving educational concepts to assure the preparation of well-qualified trade and industrial teachers. A comprehensive evaluation should be made periodically to determine the effectiveness of the cooperative program and to help insure its continual improvement. The cooperative plan should be employed on a national scale where investigations reveal it may solve problems facing other states. Companion studies should be undertaken to discover the implications of the cooperative plan for programs preparing industrial training department personnel.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Lyons (Last name), Richard (First name), A. (Middle name)

Exact Title A COMPARISON OF THE EFFECT OF CONCEPTUALLY AND NON-CONCEPTUALLY ORIENTED TEST UPON STUDENT ACHIEVEMENT AND ATTITUDE IN COLLEGE LEVEL ELECTRONICS.

Degree granted ________ Date ______ No. of pages in report ______

Granted by University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relative effect of conceptually oriented tests and non-conceptually oriented tests upon student achievement and attitude in the subject matter area of electronics. The study was designed to ascertain the extent to which the two types of tests affected (1) student achievement in electroncis, (2) student attitude toward electronics, and (3) students of different ability livels, with the students' percentile rank in a prerequisite electronics course being the standard to ascertain the ability level.

Source of Data and Method of Study:

The experiement was conducted using a control group and an experimental group, with twenty-two and twenty-three subjects respectively, and each group being a section of the course identified as Basic Electronics, I. E. 142, offered through the Department of Industrial Education, Southwest Missouri State College, Springfield, Missouri. The research design followed the "Non-Equivalent Control Group Design" in that it accepted the regular registration procedure as the method of assigning subjects to the groups. The students' percentile rank in a prerequisite course and scores on the *Cooperative School and College Ability Test Form A* were considered. The Mann-Whitney U Test was used to compare the percentile ranks and the "t" test was used to compare the *Cooperative School and College Ability Test* scores. The pretest comparison did not reveal any significant difference between the groups. Each group received the same number of tests, and the same amount of review and critique time.

Findings and Conclusions:

When the groups' mean scores on the posttest of achievement were compared, no significant difference was revealed, thus indicating that the type of unit test (conceptual or non-conceptual) did not have a significantly different influence upon the achievement of the students. Upon comparison of the groups' median scores on the posttest of attitude, no significant difference was revealed, thus indicating that the type of unit test (conceptual or non-conceptual) did not have a significantly different influence upon the attitude of the students.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author McArthur (Last name), Ross (First name), J. (Middle name)

Exact Title SELECTION AND MANAGEMENT OF INDUSTRIAL ARTS EQUIPMENT IN THE SECONDARY SHCOOLS OF MISSOURI.

Degree granted Ed.D., Date 1955, No. of pages in report 213

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain what major equipment is found in industrial arts shops in Missouri, the current practices used in equipping and maintaining shops in the state, and how these practices compare with practices and procedures recommended by a selected group of specialists in the field.

Source of data and method of study:

Information regarding practices and procedures used was obtained through information forms submitted to industrial arts teachers in the state and to superintendents with industrial arts teachers on their staffs. This information was compared with opinions of selected teacher trainers throughout the United States, concerning preferred or desirable practices, obtained through information forms submitted to them.

Findings and Conclusions:

The most important factors in the selection of equipment were safety features, educational value, and quality. Equipment in use is often smaller than what specialists recommend. Few teachers reported fixed equipment budgets. Maintenance is not usually allowed for or integrated into the instructional program, nor are teachers adequately prepared to perform this function. The majority of schools use industrial arts equipment for upkeep of the school plant, although specialists do not favor this practice. Obsolescence is not given enough consideration in replacement practices. A shortage of funds for equipment often leads to poor practices in selection and management of equipment. Many small schools cannot justify further expenditure of funds for equipment with present enrollment and limited use of equipment. Maintenance and inventory are not stressed enough in the training of teachers. In general, procedures and practices used in procurement and management of equipment compare favorably with those recommended by specialists.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author MacDonald (Last name), Manley (First name), Elroy (Middle name)

Exact Title A STUDY OF CHANGES IN THE EMPLOYMENT STATUS OF YOUTH IN DETROIT.

Degree granted Ph.D., Date 1944, No. of pages in report 409

Granted by University of Michigan (Name of institution) Ann Arbor, Michigan (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the changes in employment status of youth in Detroit, with implications for social, educational, and vocational guidance.

Source of data and method of study:

Information not available.

Findings and Conclusions:

Information not available.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author McCain (Last name), Jerry (First name), Clay (Middle name)

Exact Title: TEXTBOOK SUITABILITY FOR THE INDUSTRIAL ARTS PROGRAM IN TEXAS.

Degree granted Ed. D., Date 1959, No. of pages in report 112

Granted by North Texas State College (Name of institution) Denton, Texas (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the degree of suitability of the State-adopted industrial arts textbooks for use in a sound industrial arts program in Texas.

Source of Data and Method of Study:

Available literature, research studies, the American Vocational Association bulletin, State bulletins, textbook publishing companies, and a panel of teachers of industrial arts for the various subject areas for which State-adopted textbooks are provided. The available textbooks were classified according to grade level, and the subject matter for the various subject areas was approved by a jury. Criteria were developed and applied to the content of the State-adopted textbooks for industrial arts. The degree of suitability of textbooks under study was expressed in terms of percent.

Findings and Conclusions:

Textbooks for drawing and woodworking were found to be more suitable than the textbooks for the other subject areas. The State-adopted textbooks for the industrial arts program were found to have a low degree of suitability with respect to much of the approved subject matter as determined in this study. The textbook for the area of crafts received a low rating, partly due to the absence of treatment of certain phases of the subject area. In order to conduct a sound industrial arts program, teachers of industrial arts for the various subject areas must rely on supplementary texts and other materials in classroom instruction because of the low levels of suitability of the State-adopted textbooks. There is a need for more comprehensive textbooks in all the subject-matter areas, particularly in crafts, metalworking, auto mechanics, and electricity and electronics.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author McElheny, John, Richard
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL EDUCATION IN PUERTO RICEO: AN EVALUATION OF THE PROGRAM IN "OPERATION BOOTSTRAP" FROM 1948 to 1958.

Degree granted Ph. D. Date 1960 No. of pages in reprt 211

Granted by The Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate and evaluate the industrail education program in Puerto Rico and its contribution to economic development during the years 1948 to 1958.

Source of Data and Method of Study:

The research design of this study may be characterized as historical and descriptive. An analysis of the organization and management of the program was made. An evaluation of;the program was made through interviews, visits to schools, and discussions. Data collected through the survey were classified, interpreted, and reported.

Findings and Conclusions:

1. Over a half million dollars has been budgeted to industrial arts, and three million to trade and industrial education for physical facilities during the years 1948-58.
2. Enrollments have stabilized at 32,000 for industrial arts and at 22,000 for trade and industrial education. It is estimated that the needs of industry will surpass the number of high school graduates by more than 100,000 in 1975, making the need for student retention already critical.
3. The industrial education program of Puerto Rico has developed on a sound philosophical base and keyed to a rapidly expanding economy. Industrial arts and trade and industrial education have participated in and contributed to the industrialization of Puerto Ricl, and together they have implemented' human resources as a keystone to the success of the economy of this country.

486

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Mc Gaw (Last name), Sidney (First name), Edwin (Middle name)

Exact Title EQUIPMENT NEEDS FOR VOCATIONAL MACHINE SHOP CLASSES.

Degree granted Ed.D., Date 1952, No. of pages in report 136

Granted by University of California (Name of institution) Berkeley, California (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a procedure for ascertaining the most appropriate equipment for pre-employment training in a vocation-industrial education program; and to apply this procedure in determining the major equipment needs for skill training.

Source of data and method of study:

Data were obtained from course objectives, occupational analysis, course of study outlines, surveys of equipment, equipment use studies, and from questionnaires to vocational machine shop instructors, trade advisory committee members, and from the apprentice standards in use in the San Francisco and surrounding bay areas.

Findings and Conclusions:

Equipment should be obtained which will meet the educational objectives, and should be selected to suit specific training needs in terms of planned maximum usage. Each shop should have a variety of equipment sufficient to teach efficiently the skills in the course of study, plus sufficient duplicate facilities to provide training stations for a determined load on a planned instructional basis. A recommended list of major equipment items for a pre-apprentice class was developed.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author McMurry, James, Gilbert
(Last name) (First name) (Middle name)

Exact Title AN EXPERIMENTAL COMPARISON OF SELF-INSTRUCTIONAL MATERIALS VERSUS TRADITIONAL METHODS IN TEACHING RELATED INFORMATION IN THE COMPREHENSIVE GENERAL SHOP

Degree granted Ed. D., Date 1964, No. of pages in report 265

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to ascertain whether or not self-instructional materials can be applied successfully to the teaching of related information in a junior high school comprehensive general shop.

Source of Data and Method of Study:

The study was conducted as a controlled experiment involving two groups of students. The control group was taught related information by means of informational assignment sheets and class discussion. The experimental group was taught the same information by means of self-instructional assignments.

Findings and Conclusions:

1. No significant difference was found between experimental (programmed) and control (traditional) groups in knowledge gained during the experiment, nor did I.Q. scores, reading levle, or grade level significantly affect informational achievement level.

2. No significant difference was found to exist in the attitude of the two groups toward the course.

3. Significantly less time was required by the experimental group to recieve instruction in related information.

4. Significantly less time was required for the instructor to present instruction to the experimental group than was required for him to present the instruction to the control group.

5. The use of self-instructional materials may be expected to result in a significant saving of time for both the students and the instructor.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author McRobbie (Last name), J. (First name), M. (Middle name)

Exact Title IDENTIFICATION OF STRENGTHS AND WEAKNESSES OF OCCUPATIONAL TASKS PERFORMED BY CALIFORNIA SUPERVISORS OF INDUSTRIAL ARTS, AS DETERMINED BY ANALYSIS OF CRITICAL INCIDENTS.

Degree granted Ed.D., Date 1963 No. of pages in report 373

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

1. To identify those tasks for which seventh through twelfth grade industrial arts supervisors were especially well-prepared and those tasks for which they needed a more extensive or different type of preparation.
2. To determine relevant information concerning these supervisors' school systems, job functions and professional preparation.
3. To identify the needs of industrial arts teachers who did not have this specialized supervision.

Source of Data and Method of Study:

The study involved personal interviews with all twenty-eight supervisors to obtain information in parts (1) and (2) above, with the former utilizing the critical incident technique developed by Flanagan. Questionnaires were sent to one industrial arts teacher in each of the state's forty-two junior high schools and 185 high schools, which did not have industrial arts supervision within either the district or county, to determine the supervisory needs of these teachers.

Findings and Conclusions:

1. The most critical factor in determining the successful performance of industrial arts supervisors is their human relations.
2. Industrial arts supervisors are making relatively little effort in evaluation, research and planning.
3. There is no appreciable differentiation, by supervisory task categories, between the frequencies of effective and ineffective behaviors.
4. There has been little sound basis for determining the teacher loads of some supervisors.
5. Industrial arts department heads make an almost negligible contribution to the improvement of the teaching-learning situation is schools without industrial arts supervision.
6. California must continue to be responsible for the preparation of most of its future industrial arts supervisors.

489

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Maddox (Last name), Marion (First name), Errol (Middle name)

Exact Title EDUCATIONAL NEEDS OF YOUTH AND ADULTS OF MOBERLY, MISSOURI.

Degree granted Ed.D., Date 1951, No. of pages in report 152

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain entry job opportunities and the educational needs and interests of youth and adults of Moberly; to evaluate the present educational program of Moberly Junior College; and to suggest improvements in the present education program.

Source of data and method of study:

Data were secured from an entry job survey of the city of Moberly; follow-up study of students of 1946-47 school year; survey of students currently enrolled; opinions of adults of the community; records of Moberly Public Schools; and State Department records. Percentage and rank technique was used to handle the data.

Findings and Conclusions:

The Moberly Junior College seemed to be performing its function of college preparation and pre-professional preparation satisfactorily. The course offerings for students who will work at service, semiskilled, distributive, farm, machine operator, and technical jobs were not adequate. The adult education program in general and vocational education needed to be expanded. The Moberly Junior College needed to develop better guidance services. The addition of certain courses in general, technical, and vocational education was recommended.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Magowan (Last name), Robert (First name), Evan (Middle name)

Exact Title A COMPARISON OF PRAGMATICAL AND HYPOTHETICAL PROBLEMS FOR DEVELOPING CREATIVITY IN DESIGN.

Degree granted Ed. D., Date 1967, No. of pages in report

Granted by Texas A&M University (Name of Institution) College Station, Texas' (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine if there were differences between a pragmatic or hypothetical approach to developing creativity in product design.

Source of Data and Method of Study:

The experimental design was employed with a group of ninety-eight freshmen architecture students and forty-two industrial education students who were randomly assigned to treatment groups. Six design problems were assigned to each group and the effect of the treatment was measured by (a) asthetic awareness (b) quantity of ideas and (3) unique ideas.

Findings and Conclusions:

The findings tend to support the conclusion that while there is no significant difference between the pragmatic and hypothetical approaches to product design, the quality of design ideas seems to be related to measures of creative ability.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Mahoney, James, Herbert
(Last name) (First name) (Middle name)

Exact Title STATE INSTRUCTIONAL MATERIALS IN INDUSTRIAL ARTS: THEIR STATUS, CONTENT, PREPARATION AND USE.

Degree granted Ed. D., Date 1956, No. of pages in report 155

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the status, content, preparation, and use of industrial arts instructional materials prepared under the leadership of State departments of education.

Source of Data and Method of Study:

An analysis of State-prepared industrial arts publications, letters and information forms from representatives of the 48 State departments of education, and information forms returned by 357 Missouri industrial arts teachers.

Findings and Conclusions:

More States plan to provide handbooks and course outlines in the future than have in the past. State school agencies currently favor course outlines over handbooks, while teachers indicate a need for both. Inadequate supervision at the State level limits the preparation of these materials. There is much uniformity of content among the State's publications. Topics relating to course content should be carefully selected, as they are used consistently. Teachers tend to make greater use of those topics which can be applied directly to the problems of routine classroom instruction. Teachers with 4 or more years of teaching experience and those with master's degrees tend to value and use State-prepared instructional materials to a greater extent than do beginning teachers and those with bachelor's degrees only.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Maley, Donald, ____________
(Last name) (First name) (Middle name)

Exact Title STUDENT TEACHING IN INDUSTRIAL ARTS: A STUDY OF SELECTED PROBLEMS WITH RECOMMENDATIONS FOR THEIR TREATMENT.

Degree granted Ph.D., Date 1949, No. of pages in report 168

Granted by University of Maryland College Park, Maryland
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine major problems in industrial arts student teaching in teacher education programs; to analyze procedures which attempt to meet these problems; and to present recommendations regarding the more promising procedures.

Source of Data and Method of Study:

A survey of the literature dealing with policies and practices in student teaching in all areas was made. A preliminary survey was conducted to select the better programs in industrial arts student teaching. A final survey was made of thirteen institutions to determine current practices and procedures.

Findings and Conclusions:

The study indicated an evident lag in the extent of practice as compared with the estimated value of a large majority of items. In other words, practice is not on a level with the thinking and understanding of the authorities in the field. A need was also indicated for broadening the scope and sphere of activities of the student teacher in industrial arts education.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Mallary (Last name), Benjamin (First name), Elisha (Middle name)

Exact Title THE USE OF OBJECTIVE TECHNIQUES IN THE SELECTION OF TRADE AND AND INDUSTRIAL TEACHERS

Degree granted Ed.D., Date 1932, No. of pages in report 207

Granted by University of California (Name of institution) Berkeley, California (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study of the problem of selecting workers from trades to teach vocational subjects in public schools. It indicates the selective criteria used in California.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Manchak (Last name), Paul (First name), James (Middle name)

Exact Title AN EXPERIMENTAL COMPARISON OF TWO METHODS OF TEACHING A PERCEPTUAL MOTOR TASK IN INDUSTRIAL EDUCATION.

Degree granted Ph. D., Date 1965, No. of pages in report 190

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To furnish applied research evidence regarding the differences between two methods of teaching a perceptual motor task to twelfth-grade students. The experimental method is programed instruction.

Source of Data and Method of Study:

Analysis of variance was used to compare differences between experimental and control groups in the experimental design using three treatments and two levels for the written test and two treatments and two levels for the performance test. The two by three design permitted the testing of significant differences between the groups on immediate, twelve-day and forty-day criterion test scores.

Findings and Conclusions:

The programed material produced statistically significant differences on overall achievement of cognitive material between the two lower ability populations. There were no statistically significant differences or achievement ascribable to differences in the method of instruction existed in performance in any of the ability levels of the two theoretical populations.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Manganelli (Last name), Fred (First name), Daniel (Middle name)

Exact Title IMPLICATIONS OF TECHNOLOGICAL DEVELOPMENTS IN INDUSTRY FOR TECHNICAL INSTITUTE PROGRAMS IN MECHANICAL TECHNOLOGY.

Degree granted Ph. D., Date 1959, No. of pages in report 299

Granted by University of Connecticut (Name of institution) Storrs, Connecticut (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the implications of technological developments in industrial practices for technical institute programs, with special reference to the mechanical technology field.

Source of Data and Method of Study:

Information on specific technological developments was obtained from sources suggested by publishing firms and engineering societies.

Questionnaires relative to significant technological developments and special technical information and skills required of mechanical technicians were sent to 50 companies engaged in metal products manufacturing in Connecticut; 70 percent of the companies responded. Additional information was obtained in personal interviews with chief engineers, tool engineers, development engineers and others.

Questionnaires relative to the mechanical technology curriculum with reference to specific or related courses in areas of significant technological developments were also sent to 50 technical institutes; 82 percent responded.

Findings and Conclusions:

The technological developments identified, listed under such categories as (1) manufacturing processes, (2) developments in new uses of materials, and (3) problems in design were not entirely new, but in many cases they were improvements over old methods.

Fifty-eight different subjects were reported as being necessary. Hydraulics, mechanics and mechanisms, chemistry, machining processes, heat, production processes, electronic controls, electronics, electricity, metallurgy, heat treatment, materials, tool design and instrument reading, were mentioned with a noticeable degree of frequency.

The analysis of the significant technological developments with respect to special technical information and special technical skills produced very few items that could be considered new. In most cases the instruction is covered as part of the curriculum; however, there were several areas which could be emphasized or expanded to include new information on prevailing processes.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Mansfield (Last name), Robert (First name), Theodore (Middle name)

Exact Title COMPETENCIES DESIRED WITH RESPECT TO TEACHERS OF INDUSTRIAL ARTS

Degree granted Ph. D. Date 1959 No. of pages in report 282

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine what should constitute an adequate public secondary school industrial arts program; to determine what undergraduate college training is most suitable for preparing teachers; and to secure data that willlindicate direction for revisions in the program.

Source of Data and Method of Study:

Data was obtained by three sets of questionnaires. They were sent to student-teachers, two groups of in-service teachers, (A and B) and to administrators. The return from the student-teachers was 100 percent, from group A approximately 67 percent, from group B approximately 50 percent, and from the administrators approximately 75 percent. The questionaires were tabulated by giving the percentage of replies to each question.

Findings and Conclusions:

1. There were some fairly serious personality discords between administrators and teachers of industrial arts because administrators did not understand industrial arts and its implications.
2. Industrial arts teachers are frequently overloaded with both class and extra duties.
3. Many programs suffer because classes are too large, the space allotted is too small, the laboratories are ill-planned, and tools equipment and materials are unsatisfactory or lacking.
4. Industrial arts teachers recommend many more and a wider variety of experiences in their undergraduate work.

Fourteen recommendations were presented to help improve the preparation and competencies of industrial arts teachers.

497

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Marburger, (Last name), Edward (First name), F. (Middle name)

Exact Title INSTRUCTIONAL UNITS FOR THE PROFESSIONAL COURSES IN VOCATIONAL INDUSTRIAL TEACHER EDUCATION.

Degree granted Ed.D., Date 1948, No. of pages in report

Granted by Pennsylvania State College (Name of institution) State College, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Analyzes the activities performed by successful vocational industrial teachers throughout the United States to ascertain units of instruction for professional courses in the preparation of teachers in the vocational industrial field.

Source of Data and Method of Study:

Findings and Conclusions:

498

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - NAITTE

Author March (Last name), Bryce (First name), D. (Middle name)

Exact Title Assessment of Informational Achievement in Industrial Arts.

Degree Granted Ph. D. Date 1961 No. pages in report 256

Granted By Southern Illinois University (Name of Institution) Carbondale, Illinois (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To assess informational and problem-solving achievement in industrial arts mechanical drawing, electricity, metalwork, and woodwork as listed by instructors and State courses of study. This achievement is commonly expressed by the phrase, "Things the Student Should Know." Certain unique characteristics of industrial arts in the Missouri State schools were set forth as being incidental to the study.

Source of Data and Method of Research: State courses of study were reviewed for a comprehensive list of "Things the Student Should Know." This list was validated by a jury of specialists in Missouri, including the State Director of Industrial Education and the State Supervisor of Industrial Education.

An informational test was prepared and administered to sample and pilot groups. Raw data for the main study were obtained from test answer sheets of students in industrial arts in the seventh, eighth, ninth, and tenth-grade levels in Missouri during one scholastic year. Appropriate statistical analyses, including a 3x4x2 dimensional random replications design, were used in the treatment of data.

Findings and Conclusions: In terms of the results of the test of their students the teachers with master's degrees were superior to those with bachelor's degrees. There was also a statistically significant difference between informational content achievement evidenced by the students of the inexperienced and the experienced teachers.

Those ninth-grade industrial arts students who had industrial arts in the seventh and/or eighth grade had better informational achievement results; and students in the districts other than the large city systems obtained the highest scores.

499

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Marshall (Last name), Thomas (First name), C., Jr. (Middle name)

Exact Title AN INTERVIEW STUDY OF ADJUSTMENT OF RECENT GRADUATES WITH WITHDRAWALS OF NEW YORK STATE HIGH SCHOOLS IN VOCATIONAL, CITIZENSHIP, AND LEISURE TIME ACTIVITIES.

Degree granted ______, Date 1941, No. of pages in report ______

Granted by Harvard University (Name of institution) Cambridge, Mass. (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( ).

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Mason, Emmett, Elwell
(Last name) (First name) (Middle name)

Exact Title THE ASSOCIATIVE MEANING AND CONTENT VALIDITY OF SELECTED ELEMENTS FROM THE INDUSTRIAL ARTS CURRICULUM PROJECT'S TAXONOMY AS DETERMINED BY CONTINUED WORD ASSOCIATION.

Degree granted Ph. D. Date 1969 No. of pages in report

Granted by Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. To determine the associative meanings which were held by manufacturing, management personnel for 14 selected management concepts.
2. To determine the principal relationships of work association responses to each management concept,
3. To compare these principal relationships to the concepts in order to determine their content validity.

Source of Data and Method of Study:

Word association data were collected in written form by the use of a controlled, continued word association technique involving a mimeographed booklet containing the concepts in random order and a tape recording containing directions and timed bell tones. The word association responses were subjected to an inspective a analysis and a statistical analysis.

Findings and Conclusions:

Twelve stimulus words elecited response words which related them to the other stimulus words, to other more specific IACP management concepts, and to the factor structure. From this it was concluded that managing, planning, organizing, controlling, formulating, researching, designing, engineering, structuring, directing, monitoring, and reporting were valid for continued use in the IACP curriculum taxonomy. The stimulus word supplying did not elicit response words which related it to the factor structure. Dominant responses did not appear in the response distributions of planning, researching, and correcting. The stimulus word correcting did not elicit enough other management concepts as responses words to allow its inclusion in the factor structure to be considered as an indication of its validity.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Massey, Hal,
(Last name) (First name) (Middle name)

Exact Title A RESEARCH INSTRUMENT FOR MEASURING THE UNIQUE CONTRIBUTIONS OF INDUSTRIAL ARTS TO THE GOALS OF GENERAL EDUCATION.

Degree granted Ed.D., Date 1965, No. of pages in report 196

Granted by University of Maryland College Park, Maryland
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study were (1) to determine the unique contributions of industrial arts to general education, (2) to develop a valid and reliable test instrument for measuring these contributions, and (3) to compare the general education growth of industrial arts students with non-industrial arts students.

Source of Data and Method of Study:

Four objectives through which industrial arts makes distinct contributions to the goals of general education were identified. A sixty question multiple-choice test was devised to measure these objectives and was administered to 118 ninth-grade industrial arts students two times. After each administration it was subjected to item analysis. It was then administered to 1082 ninth-grade industrial arts students and to 313 ninth-grade non-industrial arts students. The test results were compared to available "School and College Ability Test" (SCAT) percentile ranks.

Findings and Conclusions:

1. All industrial arts students participating were significantly below non-industrial arts students in ability level. However, the industrial arts sample employed performed as well as the sample of the latter group on the instrument.

2. A reliability coefficient of .860 was computed from scores obtained by industrial arts students. A reliability coefficeent of .810 was computed from scores of non-industrial arts students.

3. Areas to which industial arts makes unique contributions are those which assist the student to live more intelligently and effectively in a complex technological culture.

502

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Maxcy, (Last name), Eilis (First name), O. (Middle name)

Exact Title EDUCATION IN INDUSTRY.

Degree granted Doctors, Date 1941, No. of pages in report ______

Granted by Yale University (Name of institution) New Haven, Connecticut (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

503

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Mayer (Last name), Herbert (First name), C. (Middle name)

Exact Title DEMOCRATIC VOCATIONAL EDUCATION.

Degree granted Ph.D., Date 1940, No. of pages in report ____

Granted by Harvard University (Name of institution) Cambridge, Massachusetts (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

504

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Mays, William, Atkins
(Last name) (First name) (Middle name)

Exact Title THE JUNIOR ACHIEVEMENT MOVEMENT: AN EXAMINATION OF ITS PSYCHOLOGICAL, ECONOMICAL, POLITICAL, AND EDUCATIONAL SIGNIFICANCE.

Degree granted Ph. D., Date 1954, No. of pages in report 288

Granted by The Ohio State University Columbus, Ohio
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study

This study is concerned with securing, compiling, and evaluating data relative to the significant contributions of Junior Achievement experience. It is an attempt to determine its psychological, economical, political, and educational significance.

Source of Data and Method of Study:

The writer was the Program Director for Junior Achievement of Columbus. The duties connected with this position made it possible to acquire knowledge of operational details of the program through actual participation. Additional information was secured from National Headquarters in New York City.

Findings and Conclusions:

Junior Achievement is a practical demonstration of rewards and opportunities possible under our competitive system of free enterprise. Participation in the organization and operation of a Junior Achievement company develops self-confidence, leadership, respect for others, an acceptance of responsibility, a spirit of teamwork, the ability to express one's ideas, and an appreciation of the importance of punctuality. The program has very definite vocational guidance possibilities but there is no particular effort to emphasize this.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Mehallis., George,
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL ARTS TEACHER PERCEPTION OF THE MERIT AWARD PROGRAM FOR YOUTH.

Degree granted Ph. D. Date 1963 No. of pages in report 174

Granted by The Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To study the industrial arts teacher perception of the merit award program, the word perception was limited to the impressions, opinions, and apprehensions resulting from experience and observation. The initial purpose was to recruit I.A. teachers.

Source of Data and Method of Study:,

This study presents the preceptions of 113 industrial arts teachers involved in one or more of the six programs (Industrial Arts Program for youth that was launched in Miami, Florida, in 1957.) in order to assess their value in terms of continuing, projecting, expanding, modifying or dropping them. A number of contemporary movements were reviewed to provide background, all of which showed achievement in a specific curriculum.

Findings and Conclusions:

1. The findings revealed that some of these postulated values were greater than others. The greater values were improving student-teacher morale, fostering public relations, stimulating curriculum development, increasing the support of industrial arts, and strengthening administrative relations. Lesser values promoting student election of industrial arts, and recruiting of industrial arts teachers.
2. The industrial arts laboratory has done much to arouse creativity and desire for youngsters to experiment, investigate, amnipulate, and enable them to compete on a developmental basis.
3. The industrial and professional establishemnts that have supported this program have sought to recruit the award winners for their skills, the implication being that young people with basic skills and knowledges are needed by industry and the professions, and should be prepared more widely for their use.
4. Further implications include the impact on guidance personnel, school administrators, teachers, and the community in orienting industrial arts to the technology and its potential to the total educational program.

506

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Meierhenry, (Last name), Wesley (First name), C. (Middle name)

Exact Title A VOCATIONAL EDUCATION PROGRAM FOR THE SMALL HIGH SCHOOL UTILIZING SUPERVISED CORRESPONDENCE STUDY AND WORK EXPERIENCE.

Degree granted Doctors, Date 1946, No. of pages in report ________

Granted by University of Nebraska (Name of institution) Lincoln, Nebraska (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Meline, Charles, Wendell.
(Last name) (First name) (Middle name)

Exact Title A CRITICAL ANALYSIS OF THE EDUCATIONAL OBJECTIVE TO DEVELOP INTEREST IN INDUSTRY AND ITS RELATIONSHIP TO THE GRAPHIC ARTS.

Degree granted Ed. D. Date 1965 No. of pages in report 85

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To develop interest in industry as it is related to the graphic arts. The responses from the concept evaluation form were used to determine the relationships in the ranking of the concept areas as made by selected representatives of the graphic arts industry.

Source of Data and Method of Study:

A list of concept statements was assembled, examined by selected persons in education and industry, classified into the seven concept areas by sixty-five industrial arts graduate students at Colorado State College, and reviewed by industrial arts educators to insure coverage of the objective interest in industry. There were seventy-four statements on the final form which was organized so that the respondent made a weighted choice. He could also make comments or suggestions. Seventy-three Printing House Craftsmen clubs and 168 Printing Inudstry of America members were represented in the study.

Findings and Conclusions:

1. The respondents generally agree that the educational objective to develop interest in industry should be emphasized in high school grahpic arts classes.
2. The respondents genrally agree that most emphasis should be placed on the concept area of plant operational expenses and that the least emphasis should be placed on the concept areas of products, sales and promotion, and history and development.
3. The Printing House Craftsmen believe more emphasis should be placed on the concept areas of production (material and processes) and occupational information than do the Printing Industry of America representatives; the Printing Industry of American representatives believe that more emphasis should be placed on the concept areas of economic factors and labor-management relations.
4. Representatives of the graphic arts industry lack confidence in existing high school programs, are concerned as to the successful interpretation of industry, and are willing to cooperate with graphic arts educators.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Mellman (Last name), Robert (First name), A. (Middle name)

Exact Title AN ANALYSIS OF SUCCESSFUL PROCEDURES FOR THE RECRUITMENT OF SKILLED TRADESMEN FOR THE TEACHING OF VOCATIONAL INDUSTRIAL EDUCATION IN PENNSYLVANIA.

Degree granted Ed. D., Date 1957, No. of pages in report 158

Granted by The Pennsylvania State University (Name of institution) University Park, Pennsylvania (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To survey present trade and industrial education teacher personnel and predict future needs, and to suggest an effective vocational teacher recruitment program.

Source of Data and Method of Study:

A questionnaire and a review of literature on teacher recruitment.

Findings and Conclusions:

Teachers recognize the importance of recruitment practices. Certification requirements for teachers of trade and industrial classes are adequate. Teacher recruitment practices should be used in every local trade and industrial program.

509

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Menegat, Paul, Anthony
(Last name) (First name) (Middle name)

Exact Title HISTORY OF TRADE AND INDUSTRIAL EDUCATION IN OREGON.

Degree granted Ed. D., Date 1953, No. of pages in report 342

Granted by Oregon State College Corvallis, Oregon
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To show the development of trade and industrial education from its beginning to the present time as a definite part of the public school program of Oregon.

Source of data and method of study:

Data were obtained from the State Department of Education, at Salem, the U. S. Office of Education in Washington, D. C., local school districts, school board minutes, old newspaper files, personal visits, interviews, and a questionnaire.

Findings and Conclusions:

Development of trade and industrial education in Oregon was slow during its early stages. Increased emphasis was given with the passage of the Smith-Hughes Act in 1917. The diversified occupations program originally developed in Oregon in 1926 has grown from one center to twenty-two centers. During the years 1940-1945 the war training program developed from four classes in four centers to ninety-five classes in thirty-two centers. With the exception of a technical high school and the three regional vocational schools, most of the trade and industrial educational programs are conducted in comprehensive high schools. Some special developments of a pioneering nature include: classes in practical nursing, classes in placer mining, and classes in foremanship training. During the fiscal year 1945-46, an outstanding development was the large number of World War II veterans entering apprenticeship training.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Meosky (Last name), Paul (First name), Richard (Middle name)

Exact Title A STUDY OF THE RELATIONSHIP OF PERSONALITY TO TEACHING SUCCESS IN INDUSTRIAL ARTS AT THE SECONDARY SCHOOL LEVEL.

Degree granted Ed. D., Date 1967, No. of pages in report 115

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To investigate the relationship of personality to teaching success on Cattell's Personality Factor Questionnaire.

Source of Data and Method of Study:

The study was made on all 1962-1965 graduates of Trenton State College who were teaching in public schools from who Cattell's questionnaire was returned. Analyses were by T-Test Comparison and Spearman's Rank Difference Coefficient of Correlation.

Findings and Conclusions:

1. The sixteen personality factor questionnaire does not tend to significantly differentiate between the most successful group and the least successful group by use of the T-Tests and mean scores of the sixteen personality factors.

2. Personality factors tend to have close associations and therefore do not differentiate enough to be of significance.

3. The sixteen personality factor questionnaire does not have the potential for helping in the prediction of teaching success in industrial arts.

4. Principals and supervisors tend to look at personality factors in a similar manner when rating teachers.

5. When rating teachers according to age, teaching experience, final collegiate grade point average, and verbal and mathematical scores, principals and supervisors have no difference of opinion.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Messerschmidt (Last name), Dale (First name), H. (Middle name)

Exact Title A STUDY OF PART-TIME INSTRUCTORS IN VOCATIONAL-TECHNICAL EDUCATION AMONG COMMUNITY COLLEGES IN MICHIGAN.

Degree granted Ph.D. ,Date 1967 ,No. of pages in report

Granted by Michigan State University (Name of Institution) East Lansing, Michigan (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the practices used by community colleges in the State of Michigan to recruit, hire, and prepare part-time instructors in vocational-technical education, and to compare certain attitudes of part-time vocational-technical instructors with full-time vocational-technical instructors on six selected variables.

Source of Data and Method of Study:

An interview instrument was designed to facilitate the data gathering section of this study. Administrators of vocational-technical programs at twelve community colleges in Michigan were then interviewed to determine the procedures thay used to recruit, select, hire and prepare part-time vocational-technical instructors. Discussions took place in the office of each administrator, and each of these informal interviews involved approximately one hour and thirty minutes. Later, the Minnesota Teacher Attitude Inventory, along with apersonal data sheet, was administered by mail to three-hundred and twenty-seven instructors who were employed by the community colleges.

Findings and Conclusions:

1. The primary source of part-time instructors for vocational-technical education in the community colleges was local business and industry.
2. Attempts to use retured personnel from industry and the military were not successful.
3. Administrators who utilized several sources for recruiting activities had an easier time obtaining services of part-time instructors than administrators who used fewer than four sources.
4. The supply of and demand for part-time instructors appeared to be growing at similar rates. Therefore, the difficulty involved with finding instructional personnel has not increaseddappreciably in the recent years.
5. Most administrators relied on department chairmen, other administrators, and faculty to assist in the selection of part-time instructors. However, some administrators made the selection decisions without consulting anyone.
6. Topics which part-time and full-time instructors stated they would desire to be included in an in-service education program included: Teaching methodology, examination item writing, lesson plan preparation, and the philosophy of the community college.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Messman, Warren, B.
(Last name) (First name) (Middle name)

Exact Title INTEREST PATTERNS OF FRESHMEN INDUSTRIAL ARTS MAJORS IN COMPARISON WITH PERSONALITY TRAITS.

Degree granted Ed.D., Date 1963 No. of pages in report 105

Granted by Colorado State College Greeley, Colorado
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To determine what relationship, if any, exists between personality need variables, as measured by the mean scores on the scales of the Edwards Personal Preference Schedule, and vocation interest, as measured by the freshman key of the Minnesota Vocational Interest Inventory.

Source of Data and Method of Study:

The population of this study was limited to male freshmen industrial arts education majors who were enrolled in their freshman year at two large midwestern teachers colleges. The Edwards Personal Preference Schedule and the Minnesota Vocational Interest Inventory were administered to each freshman. The mean score was computed for each of the fifteen varables on the Edwards Personal Preference Schedule and for the Minnesota Vocational Interest Inventory according to the above groups. The t-test of significance was used for all of the group comparisons listed above except the last. The pearson product-moment correlation coefficient was used in the last comparison.

Findings and Conclusions:

1. The Edwards Personal Preference Schedule does tend to differentiate between the male freshmen industrial arts education majors used in this study and the Edwards group of normative men.
2. The Edwards Personal Preference Schedule does tend to differentiate between the male freshmen industrial arts education majors of this study and those of Vacek's study.
3. The Edwards Personal Preference Schedule does tend to differentiate between the male freshmen industrial arts education majors at one college and those at the other college.
4. The Minnesota Vocational Interest Inventory does tend to differentiate between the male freshmen industrial arts education majors of this study and the industrial arts majors studied by Nelson.
5. The Minnesota Vocational Interest Inventory does not tend to differentiate between the male freshmen industrial arts education majors at the two colleges of this study.
6. Both do tend to identify relationships between the personality variables of the male freshmen industrial arts education majors of this study and the vocational interests of the same group.

513

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Meyer (Last name), Harvey (First name), Kessler (Middle name)

Exact Title CURRICULUM DESIGN IN TECHNICS; A CONCEPT WITH INDUSTRIAL ARTS ITS ORIGIN.

Degree granted Ed.D., Date 1951, No. of pages in report 478

Granted by University of Florida (Name of institution) Gainesville, Florida (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To trace some theories of mind as they apply to technics, the doctrine of the arts in general, and to develop a curriculum with examples of implementation.

Source of Data and Method of Study:

Data were obtained from studies and published materials relating to the problem, interviews with leaders, technical materials from several fields, and empirical data as a result of experience.

Findings and Conclusions:

Industrial education continues to pay subservience to an outworn tradition of disciplinary transfers. Technics education seeks and finds a different basis. Some of the fundamentals in this concept are that mind is a function; that learning is a reconstruction of experience through experience; that democracy is supra-political, a values system; that the abundant life is derived from everyday concerns; that education dare not ignore these terms; that technics, home, abundance, community, and school are a continuum.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Micheels, William, J.
(Last name) (First name) (Middle name)

Exact Title STATE SUPERVISION OF INDUSTRIAL ARTS EDUCATION.

Degree granted Ph. D., Date 1941, No. of pages in report 326

Granted by University of Minnesota Minneapolis, Minnesota
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A comparative survey of practices and procedures in the areas of state supervision for industrial arts education. A jury of experts, the various state supervisors, and 353 industrial arts teachers reacted to 153 different practices which are followed or should be followed. Suggestions are made for the improvement of supervisory service to the industrial arts teachers in any state.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Michelson (Last name), Eino (First name), S. (Middle name)

Exact Title AN ANALYSIS OF THE STATUS OF WORK EXPERIENCE PROGRAMS IN MICHIGAN HIGH SCHOOLS.

Degree granted Ph. D., Date 1956, No. of pages in report 189

Granted by University of Michigan (Name of institution) Ann Arbor, Michigan (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the status of work experience programs in Michigan high schools and to analyze certain phases of program organization and operation.

Source of Data and Method of Study:

533 twelfth-grade high school districts by means of questionnaires, interviews, and published reports of schools and the Department of Public Instruction.

Findings and Conclusions:

The larger school districts offered more different kinds of work experience programs, had a larger number of students per program, and had more programs per district. No significant relationship existed between program frequency and tax wealth. The objectives were related to general and specific educational values. Most of the work experience programs were administered by the high school principal. Guidance functions were performed by the person in charge of the program. Provisions for related instruction were weak in most programs. Terminal placement was effective.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Middleton (Last name), William (First name), Howard (Middle name)

Exact Title THE RELATIONSHIP BETWEEN PERCEPTUAL-MOTOR DEVELOPMENT AND DRAFTING ACHIEVEMENT:IN THE JUNIOR HIGH SCHOOL.

Degree granted Ph. D., Date 1962, No. of pages in report 131

Granted by Purdue University (Name of institution) Lafayette, Indiana (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An attempt to find which aspects of drafting most affected by defective perceptual-motor development and to differentiate the perceptual - motor tasks were the best predictors of drafting achievement.

Source of Data and Method of Study:

The population was composed of the entire male enrollment of the eighth grade at McKinley Junior High School in Muncie, Indiana, at the beginning of the 1961-62 school year. A random sample of one hundred was chosen from the population for statistical analysis. The mean differences of the groups' drafting exercises were also determined by analysis variance. Those groups with no mean differences were separated for further statistical analysis.

Findings and Conclusions;

1. The relationship between perceptual-motor development and drafting achievement at the eighth grade level statistically significant at the .001 level.
2. Seventeen perceptual-motor tasks used in this study correlated with drafting achievement at the .001 level of confidence.
3. The scores on drafting exercises which contained oblique surface were significantly lower than the scores of the remaining four groups of drafting exercises.
4. The scores on three-view descriptions of objects presented by isometric, oblique, and perspective pictorials were not significantly different.
5. Of the perceptual-motor tasks used in this study on movement, walking board, and chalkboard tasks were the most accurate predictors of drafting achievement.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Miller (Last name), Dudley (First name), Bryant (Middle name)

Exact Title A CRITICAL ANALYSIS OF THE VOCATIONAL GLUIDANCE PRACTICES EMPLOYED BY INDUSTRIAL ARTS TEACHERS IN SELECTED JUNIOR HIGH SCHOOL IN THE UNITED STATES.

Degree granted Ed. D. Date 1965 No. of pages in report 189

Granted by The Pennsylvania State University (Name of institution) University Park, Pa. (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate the guidance preparation and opinions of industrial arts teachers as well as to identify current vocational guidance practices and methods employed in industrial arts classes of selected junior high schools in the United States.

Source of Data and Method of Study:

Survey forms were mailed to 538 prinipals of selected schools. Principals were asked to distribute the form to an industrial arts teacher in his school. 469 (87.2%) were returned. Four categories (1) I.A. teachers who emphasized guidance; (2) those who did not emphasize guidance; (3) those who had formal preparation in guidance; (4) those who had no formal preparation in guidance were developed.

Findings and Conclusions:

62% of the industial arts teachers had professional preparation in guidance. Most of these had preparation at the graduate level.

1. Guidance counselors are considered as a major resource by I.A. teachers.
2. 72% stated vocational guidance as an objective of industrial arts.
3. 76% felt that the industrial arts teacher was the best qualified faculty member to interpret guidance informationin vocational fields.
4. 67% furnish information for the individual cummulative records.
5. More teachers in the guidance group assist students in securing jobs than teachers in the non-guidance group.
6. A small amount of occupational information if being presented by industrial arts teachers in this study.
7. I.A. teachers seldom use vocational guidance units in their instruction.
8. Teachers with formal guidance preparation place less emphasis on the development of skill and more on the study of industry.

Teachers who have formal preparation in guidance tend to perform more vocational guidance activities.

1. I.A. teachers feel that guidance resources are not available to them in sufficient quantity and scope.
2. I.A. teachers feel that they are the best qualified faculty member to give guicance information pertaining to industrial pursuits.
3. Teachers with formal guidance education are more favorably disposed toward guidance than those without formal preparation in guidance.
4. The emphasis placed on the objectives of industrial arts education differs between teachers who stress guidance functions and those who do not.
5. A majority of the respondents stated that while they believe in guidance functions, they seldom practiced these functions in the classroom .

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Miller, John, G.
(Last name) (First name) (Middle name)

Exact Title THE EVOLUTION OF MACHINES AND EQUIPMENT STUDIED IN THE INDUSTRIAL-ARTS COMPREHENSIVE GENERAL SHOP.

Degree granted Ed.D., Date 1954, No. of pages in report 578

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the historic and socio-economic factors which have influenced the development of the present-day machines and equipment used in the comprehensive general shop.

Source of data and method of study:

Data were gathered from libraries, museums, and industries, both in this country and abroad, and treated in the historical method.

Findings and Conclusions:

Thirty monographs were written concerning machines and equipment considered most important as shown by the study. These monographs were written and tested on students of industrial arts in the secondary schools. Illustrations and vocabulary glossary were generously used where practicable.

519

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Miller, L., Paul
(Last name) (First name) (Middle name)

Exact Title REGULATION OF ENTRANCE INTO OCCUPATION IN THE STATE OF NEW YORK.

A STUDY OF STATE LEGISLATION IN THE STATE OF NEW YORK WHICH HAS PLACED REQUIREMENTS OF PERSONAL QUALIFICATIONS UPON INDIVIDUALS FOR LEGAL ENTRANCE INTO CERTAIN OCCUPATIONS IN THE STATE.

Degree granted Ph. D., Date 1939, No. of pages in report 315

Granted by New York University New York, New York
(Name of Institution) (City, State)

Where Available; Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the legal requirements and adaptation of law to the registration and certification of occupations and professions for the protection of the public and the regulation of certain trades and professions in New York State.

Source of Data and Method of Study:

Findings and Conclusions:

520

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Miller (Last name), Murray (First name), Lincoln (Middle name)

Exact Title DEVELOPMENT OF FACTORS RELATING TO INDUSTRIAL ARTS EDUCATION IN SCHOOL SURVEYS.

Degree granted Ph. D., Date 1947, No. of pages in report ______

Granted by University of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the growth of industrial arts from 1907 to 1941. The study emphasizes the long time required for new ideas and principles to take effect and the positive relationship between the growth of industrial arts and the professional advancement of personnel.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Miller (Last name), Thomas (First name), W. (Middle name)

Exact Title ORIGIN AND DEVELOPMENT OF MACHINES USED IN SCHOOL SHOPS.

Degree granted Ed. D., Date 1958, No. of pages in report 238

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To trace the development, from their origins to the present, of the power-operated wood and metalworking machines used in school shops.

Source of Data and Method of Study:

An intensive survey of the literature pertinent to the subject: books about machines, inventions, and the industrial revolution; textbooks used in wood and machine shops; journals of scientific and trade associations; catalogs of manufacturers of wood and metalworking machinery; and pictures of machines at various stages of their development.

Findings and Conclusions:

Most wood and metalworking machines were invented between 1770 and 1850. The invention of many of these machines is attributable to the work of a rather small group of English mechanics and inventors. A number of the early improvements in wood and metalworking machines were of a general nature, affecting the development of all. Among these general improvements were the substitution of metal for wood in frame construction, improved design, the application of an external source of power, and the development of improved cutting tools. Many wood and metalworking machines were originally constructed to duplicate as nearly as possible the hand process which they replaced. The industrial-type of machine was first introduced for school shop use. Toward the end of the 1910-20 decade a class of machines built with features making them especially adaptable for school use began to emerge.

522

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Miller (Last name), Wilbur (First name), R. (Middle name)

Exact Title Levels of Readability of General Shop Textbooks Compared with Reading Abilities of Ninth-Grade Industrial Arts Students.

Degree Granted Ed. D. Date 1960 No. pages in report 111

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the readability of general shop textbooks used on the ninth-grade level, and to compare this readability with the reading abilities of selected ninth-grade industrial arts students.

Source of Data: The readability levels of five general shop textbooks were obtained by the application of the Dale-Chall and Flesch formulas of readability. Measures of the reading abilities of 411 ninth-grade students from a specified area of centeral Missouri were obtained through a scheduled testing program. These measures of reading abilities, which were converted to grade equivalents, were compared with the readability ratings of the books.

Findings and Conclusions: The difficulty levels of the textbooks ranged from an average of eighth-grade level to an average of tenth-grade level. The range of difficulty for the samples within each textbook was quite large (as much as 11 grade levels in one of the books). Electricity and plastics sections were consistently rated as most difficult to read. The reading abilities for the 411 industrial arts students ranged from fourth to twelfth grade level with a mean grade equivalent of 8.3. Approximately 86 percent of the students had reading abilities below tenth-grade level; however, at least 40 percent of the samples, taken from four of the five books, had higher. Only one of the textbooks received a readability rating which would indicate that a majority of the students could read it effectively.

523

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Minelli (Last name), Ernest (First name), L. (Middle name)

Exact Title THE ROLE OF THE DEPARTMENTAL CHAIRMAN IN INDUSTRIAL TEACHER EDUCATION: A SURVEY OF THE REQUIREMENTS OF THE JOB AND AN ANALYSIS AND EVALUATION OF THE ACTIVITIES OF THE CHAIRMAN.

Degree granted Ed. D., Date 1957, No. of pages in report 292

Granted by Wayne State University (Name of institution) Detroit, Michigan (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To obtain pertinent facts, information on qualifications required, and other data concerning the job of the departmental chairman in industrial teacher education.

Source of Data and Method of Study:

A questionnaire-checksheet to obtain information concerning the role of the departmental chairman was sent to 123 chairmen of departments of industrial teacher education who were selected according to pre-established criteria. A study of the requirements of the job and an analysis and evaluation of the activities of the chairman were made to ascertain the role of the chairman.

Findings and Conclusions:

Information included: (1) preparation and experience desirable for performing the job, (2) working conditions of the job, (3) activities of the chairmen, (4) activities of the chairmen ranked according to importance, and (5) average weekly hours devoted by the chairmen to the various phases of their jobs, including the total number of hours spent per work week.

524

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Mitchell, John,
(Last name) (First name) (Middle name)

Exact Title THE IDENTIFICATION AND EVALUATION OF INSTRUCTIONAL UNITS IN ORGANIZATION AND MANAGEMENT OF GENERAL SHOPS FOR INDUSTRIAL ARTS TEACHER EDUCATION.

Degree granted Ed. D., Date 1954, No. of pages in report 194

Granted by The Pennsylvania State University University Park, Pennsylvania
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine from selected outstanding general industrial arts teachers throughout the United States the present practices and recommendations for instructional units in organization and management of the general shop for teacher education, and to compare the evaluations of the instructional units of all respondents and rank them in the order of their importance for professional courses, units of courses, or professionalized shop courses in the organization and management of the general shop in teacher education.

Source of Data and Method of Study:

A questionnaire-checksheet containing a validated list of 122 activities which could form instructional units in the organization and management of the general shop was submitted to outstanding general industrial arts teachers throughout the country. These teachers checked as follows the unit activities listed: (1) whether they performed or made provisions for the activity during the course of their work; (2) to what extent they delegated to students the responsibility of performing the activity; (3) the importance they attached to the activity; and (4) whether they believed the activity should be taught in teacher education programs. The mean importance ratings and activities arranged in rank order are included in the study.

Findings and Conclusions:

All but seven activities in the list rated important or above. The activities concerned with physical matters are, for the most part, considered of greater importance for the successful operation of a general shop than those concerned with organizing personnel for instruction. The problems of organization and management, particularly as they apply to the general industrial arts shop, must be given adequate consideration by those who prepare prospective teachers as well as by those who would conduct such a shop efficiently and successfully.

525

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Moegenburg, Louis, A.
(Last name) (First name) (Middle name)

Exact Title AN EXPERIMENTAL COMPARISON OF PROGRAMED INSTRUCTION VERSUS VIDEO-TAPE TELEVISION IN TEACHING SELECTED ORTHOGRAPHIC PROJECTION CONCEPTS.

Degree granted ____________, Date May, 1969 No. of pages in report ____

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the effectiveness of two variations of administering programed instruction materials for teaching selected mechanical drafting concepts as compared to the effectiveness of video-taped television presentation. Other considerations in the study involved the analysis of American College Testing (ACT) scores of an individual's ability to learn the selected concepts.

Source of Data and Method of Study:

Two experimental groups, each using programed instruction booklets, but administered differently, were evaluated and compared with the control group which viewed the television presentation on video-tape in two, twenty-seven minute segments.

Findings and Conclusions:

1. A difference between treatments did exist.
2. There was no significant difference between the programed instruction treatments,
3. A significant difference in learning did exist between video-tape television presentations and programed instruction booklets.

Students with high mathematics scores had greater test score differences whereas low mathematics scores and low differences were also correlated. There was no significant relationship between test scores and previous drafting experience, high school rank, English ACT scores, or composite ACT scores.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Moeller (Last name), Carl (First name), Albert (Middle name)

Exact Title Aims for Undergraduate Industrial Teacher Education: A Study of Projected Aims and Supporting Principles as Evaluated by Selected Representatives of Labor and Industry.

Degree Granted Ed. D. Date 1961 No. pages in report 254

Granted By Wayne State University (Name of Institution) Detroit, Michigan (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To develop a series of aims and supporting principles for the direction of programs of industrial teacher education, evaluated by selected representatives of labor and industry. These aims, thus evaluated, are intended to be useful in the development and improvement of programs of undergraduate industrial teacher education in the United States.

Source of Data and Method of Research: Data were provided as the result of a series of depth interviews with 38 selected representatives of labor and industry who evaluated a list of tentative aims and principles for the direction of programs of undergraduate industrial teacher education.

Findings and Conclusions: Well-defined competency levels such as the commonly held concept of journeyman status for trade occupations, should be established for the several broad areas serviced by teachers of trade or technical subjects.

Apprenticeship experience is essential for teaching the manipulative phases of trade occupation, but is not necessary for the theoretical, or "related instruction" phases of an occupation. For more advanced levels of instruction, such as those necessary for upgrading programs in the skilled trades and for preparing technicians, the cooperative work study program is, tentatively, the best approach.

In addition to basic orientation, teachers of industrial arts should develop a depth competence in one or two of the industrial arts areas. Solution of practical problems requiring independent research and the application of scientific and technological principles is an effective method of developing this competence. Such experiences should be preceded by the development of fundamental skills in hand or machine operations.

An understanding of the social aspects as well as the technical processes of industry is essential for all teachers of industrial education and is best achieved through a balanced program of both academic orientation and actual work experience, neither of which is adequate by itself.

All teachers of industrial education must be thoroughly competent in all phases of the professional aspects of teaching, and should experience as broad a background in the liberal education phase of their preparation as teachers in other disciplines.

527

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Money, Homer, E.
(Last name) (First name) (Middle name)

Exact Title PRACTICES AND OPINIONS OF TEXAS SCHOOL ADMINISTRATORS CONCERNING FEDERALLY REIMBURSED VOCATIONAL EDUCATION.

Degree granted Ed. D., Date 1956, No. of pages in report 199

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain practices and opinions of Texas school administrators concerning federally reimbursed programs of vocational agriculture, trade and industrial education, distributive education, and vocational home economics.

Source of Data and Method of Study:

Opinionnaires sent to every superintendent and principal in Texas whose school offered one or more federally reimbursed vocational programs.

Findings and Conclusions:

In the opinion of the administrators: Length of vocational classes resulted in scheduling difficulties, general education funds were being diverted to vocational education, withholding reimbursement from mixed vocational and nonvocational classes was unsound, vocational needs of youth were not being met, vocational teachers should not receive larger salaries than others, and professional education courses had not aided in administering vocational programs. The administrator did feel that vocational clubs were desirable, that no feeling of separateness between vocational and general education students was noticeable, that there were not too many Federal and State controls, that the communities regarded vocational education highly, that vocational teachers kept abreast of current changes, and that the help given by State supervisory personnel was sufficient. The administrators' opinions of what guidance should be does not correspond to those of authorities in the field.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Monroe (Last name), H. (First name), B. (Middle name)

Exact Title Personality Variables of Industrial Arts Teachers.

Degree Granted Ed. D. Date 1960 No. pages in report 78

Granted By Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To differentiate between most and least successful industrial arts teachers by means of the Edwards Personal Preference Schedule.

Source of Data and Method of Research: The application of the Edwards Personal Preference Schedule to a group of industrial arts teachers--evaluation of teachers most and least successful. Pattern analysis was by means of the Chi-Square test and difference in means by use of the t-test to determine the difference in expressed needs of most and least successful industrial arts teachers.

Findings and Conclusions: The Edwards Personal Preference Schedule does tend to differentiate between the most and least successful industrial arts teachers who formed the population of this study.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Monroe, Lynne, C.
(Last name) (First name) (Middle name)

Exact Title THE PRESENT STATUS OF CO-OPERATIVE EDUCATION IN AMERICA.

Degree granted Ed.D., Date 1939, No. of pages in report 214

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study presenting factual data concerning background, development, and status of co-operative education in secondary schools and junior and senior colleges of the United State up to 1939.

Source of Data and Method of Study:

Findings and Conclusions:

530

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Mooney (Last name), James (First name), Joseph (Middle name)

Exact Title AN INVESTIGATION OF PROFESSIONAL GROWTH OF STUDENTS MAJORING IN AN INDUSTRIAL ARTS EDUCATION PROGRAM REGARDING SELECTIVE PROFESSIONAL ELEMENTS OF INDUSTRIAL ARTS.

Degree granted Ed.D., Date 1967, No. of pages in report 234

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The purpsoe of the study was to analyze industrial arts teacher education for changes and improvement in terms of students' professional growth by professional courses and student teaching; changes and direction of change relative to how individuals view industrial arts as a student and as a teacher; and the influence of supervising teachers and educators upon the student during his preparation.

Source of Data and Method of Study:

An instrument to measure the professional growth of students was administered to industrial arts majors, 1965 industrial arts graduates with one year of teaching experience and industrial arts supervising teachers of the Industrial Arts Education program, State University of New York, College at Buffalo, in the fall of 1966 and the findings of the study were analyzed by using the t-test for significance.

Findings and Conclusions:

Among others, the following conclusions were drawn from the study:

1. Generally, the student's professional growth is positive and continuous during his preparation as an industrial arts teacher.
2. In terms of this study, industrial arts supervising teachers do not have as much adverse influence on student teachers regarding professional values and beliefs as research has implied.
3. Student teaching experience does provide positive professional growth towards the professional values and beliefs held by industrial arts educators.
4. The industrial arts teacher in his second year of teaching appears to be at a stage in which his professional growth does not improve and, if anything, slightly regresses, as measured by the Inventory of Professional Elements of Industrial Arts.

531

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Moore (Last name), Alfred (First name), H. (Middle name)

Exact Title PRACTICES AND OPINIONS RELATIVE TO PRACTICAL ARTS EDUCATION FOR MENTALLY RETARDED SECONDARY SCHOOL YOUTH.

Degree granted Ed.D., Date 1954, No. of pages in report 194

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the implications of practices and opinions in practical arts education for mentally retarded secondary school youth, for the implementation of such programs.

Source of Data and Method of Study:

By information form, data on practices and opinions were secured from 154 administrators in 30 states. From information forms completed by 341 practical arts teachers of mentally retarded youth, opinions of the 51 best qualified teachers were used. Some data were handled on the basis of per cent of agreement, other data were handled by rank difference.

Findings and Conclusions:

Considerable agreement and disagreement was found on objectives, policies, and methods; administrative classification and teacher qualifications often resulted in differences of opinion. Shifts in emphasis and increase in practical arts were desired; but few schools had used job surveys and follow-up studies, and only the minority resulted in curriculum adjustments. Course and content selection criteria often varied in value between the two uses. The extent of use and instructional value of teaching aids and techniques were often at variance. Youth aged 13 through 15 should devote one-third of their school time to practical arts, those 16 and over one-half time. Practical arts should emphasize general homemaking, home mechanics--followed closely by arts and crafts and general shop--general agriculture, occupational training, and business training for personal needs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Morgan, J., B.
(Last name) (First name) (Middle name)

Exact Title PERSONALITY VARIABLES OF INDUSTRIAL ARTS TEACHERS.

Degree granted Ed.D., Date 1961 No. of pages in report 135

Granted by Colorado State College Greeley, Colorado
(Name of institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To ascertain whether or not, on the basis of certain personality factors as measured by the scales of the Edwards Personal Preference Schedule, differentiation could be made between the following groups: the most and least successful industrial arts teachers, the elementary school and the senior high school industrial arts teachers, the industrial arts teachers of this study and industrial arts majors (Crist, 1961), the industrial arts teachers of this study and industrial arts teachers (Monroe, 1960), and the industrial arts teachers of this study and the Edwards' normative group of college men.

Source of Data and Method of Study:

The population of this study was limited to the industrial arts teachers of a large mid-western city school system. A rating scale was devised and used for the purpose of securing a rank order evaluation of the industrial arts teachers. The statistical analysis of the data was two-fold: (1) a comparison of mean score differences by the t-test of significance, and (2) a pattern analysis of the Edwards Personal Preference Schedule variables by the chi-square test of significance.

Findings and Conclusions:

1. The Edwards Personal Preference Schedule does tend to differentiate between the industrial arts teachers of this study and the Edwards' normative group of college men.
2. The Edwards Personal Preference Schedule does tend to differentiate between most successful industrial arts teachers and least successful industrial arts teachers.
3. Pattern analysis of the scores on the Edwards Personal Preference Schedule does tend to differentiate between most successful industrial arts teachers and least successful industrial arts teachers.
4. The Edwards Personal Preference Schedule does tend to differentiate between the industrial arts teachers of this study and the industrial arts teachers of Monroe's group.
5. The Edwards Personal Preference Schedule does tend to differentiate between the elementary school industrial arts teachers and the senior high school industrial arts teachers.
6. Pattern analysis of the scores on the Edwards Personal Preference Schedule does tend to differentiate between elementary school industrial arts teachers.
7. The Edwards Personal Preference Schedule does tend to differentiate between the industrial arts teachers of this study and Crist's industrial arts majors.

533

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Morgan (Last name), Daryle (First name), Whitney (Middle name)

Exact Title Status and Pre-Employment Training Requirements of Welding Tradesmen, Technicians, and Technologists.

Degree Granted Ed. D., Date _____ No. pages in report _____

Granted by University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: The major purposes of this study were to (1) assess the status of welding in the various types of manufacturing industries of the United States, and (2) ascertain the nature of the occupational preparation desired for welding tradesmen, technicians, and technologists.

Source of Data and Method of Study: Preliminary data for this study were obtained from a review of scientific literature, technical books, and publications of professional societies related to the welding field. With the information obtained an information form was designed to secure the necessary information from members of the American Welding Society who represented industrial companies engaged in extensive welding fabrication. The industrial welding specialists were asked to indicate the present status of welding tradesmen, technicians, and technologists and to rate the importance of 74 content items for pre-employment training. Conten items were classified into categories of "absolutely essential," "important, but not essential," "moderately important," and "unimportant," and a weighted mean was reported for each item. Industrial welding specialists were assigned to groups on the basis of the major type of production in which their firms were engaged in orde to categorize their responses properly. The responses were reported in tabular form according to major content categories. The weighted means for content items reported by each industrial group were tested for significant differences by Freidman's two-way nonparametric analysis of variance.

Findings and Conclusions: Since 27 content items for welding tradesmen received a mean rating of "unimportant" by industrial welding specialists, it may be concluded that these content items could be removed from pre-employment training programs for welding tradesmen. The evidence presented in this study concludes that six content items, "flux shielded metal electrode arc welding," "inert gas shielded metal electrode arc welding," "inert gas shielded tungsten arc welding," "blue-print reading," should be included in all preparatory programs for welding tradesmen. Since two areas of content, "miscellaneous welding processes" and thermit welding processes," were rated as "unimportant" in the pre-employment training of welding tradesmen by welding specialists, these two areas of content could be remove from preparatory training programs. Four content items "inert gas shielded metal arc welding," "inert gas shielded tungsten arc welding," "flux shielded metal electrode arc welding," and "blue-print reading," should be included in all preparatory programs for welding technicians. Thirteen content items received a mean rating of "absolutely essential and should be included in all preparatory programs. A great need exists for welding technicians and technologists to receive pre-employment preparation in those areas represented by the above information.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Morgan (Last name), Jack (First name), Ward (Middle name)

Exact Title FACTORS INFLUENCING THE PASSAGE OF FEDERAL LEGISLATION FOR VOCATIONAL EDUCATION.

Degree granted Ed.D., Date 1951, No. of pages in report 363

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the economic-social-philosophical factors that have influenced the enactment of federally aided programs of vocational education of less than college grade in the public schools.

Source of data and method of study:

Primary data were secured from the proceedings of conventions of the National Education Association, National Association of Manufacturers, American Federation of Labor, National Society for the Promotion of Industrial Education, Congress in session, and reports of state commissions on industrial education. Secondary data were secured from official publications of these organizations, other current publications and books pertinent to the subject.

Findings and Conclusions:

The initial movement for vocational education came about as an attempt to provide an education better suited to the needs of the masses of boys and girls. The most persistent force promoting the Smith-Hughes Act was the National Society for the Promotion of Industrial Education. One of the most important factors precipitating a demand for vocational education was the popularity of mechanistic psychology. An essential factor in obtaining Federal legislation is the presence of strong and vigorous leadership on the part of influential senators and congressmen. Since its formation in 1926, the American Vocational Association has been the driving and organizing force behind movements to further develop the program of federal aid for vocational education. Early bills passed by Congress tended to be simple, specific and provided a minimum appropriation. Subsequent laws gradually broadened the scope and increased the funds available to the states. Attempts to further develop the program of vocational education have usually been during periods of national emergency or economic and social crises. Congress, for the most part, has been satisfied with the results of federally aided vocational education and friendly toward proposals for its further development.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Morgan, Sr., Leo, Donald
(Last name) (First name) (Middle name)

Exact Title Development and Standardization of a Test in Basic Electronics for the Eighth Grade in the State of Minnesota.

Degree granted Ed. D., Date Spring 1966 No. of pages in report 118

Granted by Colorado State College Greeley, Colorado.
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To construct and validate a reliable achievement test to measure basic understandings, concepts, and applications of basic electronics.

Source of data and method of study: Content validity was established by using the suggested course content in Minnesota 's Curriculum Bulletin 13 and by six cooperating basic electronics instructors acting as a jury and evaluating the test instrument. Two forms of the test were administered in a pilot study. The items showing the most favorable difficulty level and discrimination index were selected for the final instrument. The final instrument consisted of forty-eight multiple choice items. This test was administered to 1092 eighth grade basic electronics students from twenty-one schools throughout the State of Minnesota. Using the Kuder-Richardson Formula 20, reliability coefficient of .861 was estimated and considered satisfactory. The average item discrimination was .363. The difficulty index for the forty-eight items was .422. The mean for the total population tested was 19.83. Test scores of various sub-groups of the sample were compared with no significant difference between groups.

Findings and Conclusions: It is possible to construct and standardize a valid and reliable achievement test. It is important to construct test items with a favorable difficulty level and discrimination index. Care should be taken not to make the test too long or too short. This test can be used by ninth grade teachers in Minnesota to establish acceptance and placement procedures in their electronics program.

536

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Mortimer (Last name), William (First name), Earl (Middle name)

Exact Title ATTITUDES OF EDUCATORS AND STUDENTS IN UTAH TOWARD MANUAL LABOR AND MANUAL WORKERS.

Degree granted Ed. D., Date 1956, No. of pages in report 212

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the attitudes which educators and students in Utah hold toward manual labor and manual workers, to compare the attitudes of various groups of educators and students, and to find out if any relationship exists between the general level of intelligence of students and their attitudes toward manual labor and manual workers.

Source of Data and Method of Study:

Information forms in which an attitude scale was incorporated, and which were administered to randomly selected samples of educators and senior high school students in Utah; high school and vocational school records; and literature in the field.

Findings and Conclusions:

The mean scores on the attitude scale indicated relatively favorable attitudes toward manual labor and manual workers for both educators and students. Subgroups, ranked from those who had the most favorable attitudes to the least favorable, were as follows: (1) Trade and industrial teachers, (2) industrial arts teachers, (3) vocational agriculture teachers, (4) superintendents, (5) trade and industrial students, (6) vocational agriculture students, (7) principals, (8) counselors, (9) industrial arts students, (10) regular students, (11) regular teachers. When classified by sex, male educators had a more favorable attitude than male students, and female students had a more favorable attitude than male students. Educators with labor union affiliation and students from families with union affiliation had more favorable attitudes than those without union affiliation. There was no important relationship between the general level of intelligence and attitude toward manual labor and manual workers.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Morton, , Berry , Ezell
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF DAY-TRADE AND NON-VOCATIONAL HIGH SCHOOL SENIORS.

Degree granted Ed.D. , Date 1950 , No of pages in report 201

Granted by University of Missouri Columbus, Missouri
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain whether personal-social differences exist between high school seniors enrolled in day-trade classes and those not enrolled in vocational classes, and to ascertain the nature and extent of these differences if existing.

Source of Data and Method of Study:

Data were obtained through high school records, information forms, the SRA Test of Primary Mental Abilities, and the Kuder Preference Record for 195 day-trade and a random sampling of the same (195) of non-vocational students enrolled in 12 Missouri comprehensive high schools having day-trade programs. The two groups were then compared.

Findings and Conclusions:

Students enrolled in day-trade classes and non-vocational classes were apparently equal in age and grade placement. Students enrolled in day-trade and non-vocational classes had a wide range of intelligence but the mean intellegence of the students in day-trade classes was below that of the students enrolled in non-vocational classes. Students enrolled in day-trade classes came from families of a lower economic strata, from parents of lower formal educational attainment, from slightly larger families, and from more broken homes than did students enrolled in the non-vocational classes. Students enrolled in day-trade classes and non-vocational classes ranged widely in scholastic achievement, however, the mean scholastic achievement of students in day-trade classes was inferior and also below that of the students enrolled in non-vocational classes. Students enrolled in day-trade and non-vocational classes had wide range of occupational interests and there were marked differences and similarities in the occupational interests of the two groups. Students enrolled in day-trade and non-vocational classes tended to have different curricular needs and interests. Students enrolled in day-trade classes did not possess leadership qualities to the same extent as did the non-vocational classes when measured in terms of school offices held.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NIATTE

Author Moss (Last name), Jerome, Jr. (First name), (Middle name)

Exact Title An Experimental Study of the Relative Effectiveness of the Direct-Detailed and the Directed-Discovery Methods of Teaching Letterpress Imposition.

Degree Granted Ed. D. Date 1960 No. pages in report 280

Granted By University of Illinois (Name of Institution) Urbana, Illinois (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To provide experimental evidence as to the relative effectiveness of two methods of verbal presentation for introducing meaningful, technical, nonmanipulative material to groups of students.

Source of Data and Method of Research: 106 vocational-industrial students, divided into treatment and IQ level subgroups, equated on nine pre-experimental characteristics, received a lesson containing identical content by two methods differing in the amount and kind of teacher guidance provided. Criterion tests of initial learning, retention, and transfer were administered over a 6-week period. Treatments by levels analysis of variance design were employed.

Findings and Conclusions: The direct-detailed and the directed-discovery methods were found equally effective as measured by tests of initial learning, for 1-week and 6-week retention, and for 1-week and 6-week transfer. No interaction of method and IQ level was found.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Moutoux (Last name), Alfred (First name), Carl (Middle name)

Exact Title THE SELECTION OF STUDENTS FOR TRADE-PREPARATORY COURSES.

Degree granted Ed.D., Date 1948, No. of pages in report 193

Granted by Indiana University (Name of institution) Bloomington, Indiana (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An evaluation and analysis of factors commonly used in the selection of students for trade-preparatory courses and the subsequent development of a practical plan of selection. The findings and recommendations are based on a study of 422 boys attending Mechanic Arts School between January 1940 and June 1945.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Mudgett (Last name), Albert (First name), Gordon (Middle name)

Exact Title THE EFFECTS OF PERIODIC TESTING ON LEARNING AND RETENTION IN ENGINEERING DRAWING.

Degree granted Ph. D., Date 1958, No. of pages in report 311

Granted by University of Minnesota (Name of institution) Minneapolis, Minnesota (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine the differential effects of three methods of evaluation--daily testing, weekly testing, and monthly testing--on learning and retention of the materials studied in a beginning course of engineering drawing. Differences due to instruction or instructor method interactions were also investigated.

Source of Data and Method of Study:

184 students in eight sections of Drawing 4 at the University of Minnesota were selected and assigned to testing groups by random means. Four instructors, assigned at random, each taught two sections. Data were collected for the students on six measures. High school percentile rank and scores on Engineering Drawing Test-Form A (pretest) were used as control measures. Engineering Drawing Test Form B (fourth week), Form A (ninth week), and the Theory Test (final) were 5-item multiple-choice tests designed of orthographic projection and related graphics. The Performance Test (last class meeting) was constructed to measure the students' ability to understand and interpret problem situations and also their ability to apply the correct solution to the problems.

Findings and Conclusions:

At the end of 4 weeks of freehand drawing instruction, no significant effects of the testing program were found. During the ninth week of instruction, differences significant at the 1-percent level were found between combined groups. According to adjusted means, these differences were primarily due to the superiority of the groups tested daily. On the final test, difference between groups were significant at the 5-percent level. In a breakdown analysis the differences were found to be between combined groups, and the adjusted means indicated a superiority for instructor A, and B. On the performance Test, differences significant at the 1-percent level were found for three comparisons: Instructional outcomes for instructor D surpassed those for instructor C; the daily testing method was found to be superior to the monthly testing method; the combined daily-monthly test groups were superior to the combined weekly-monthly test groups where the monthly components were equal. By inference, the daily test method was also found to be superior to the weekly test method. The findings indicate that a daily testing program has considerable merit, and further investigation is recommended.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Muller (Last name), Erwin (First name), T. (Middle name)

Exact Title A COMPARISON OF TWO METHODS OF TEACHING REPRESENTATIONAL DRAWING IN A SECONDARY SCHOOL.

Degree granted Ph. D., Date 1938, No. of pages in report 179

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study, conducted at the Hebrew Technical Institute in New York City, of two groups of students who were taught representational drawing by different methods. The aids used in perspective drawing, teaching procedures, and student evaluation are discussed.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Murbach (Last name), Nelson (First name), Jacob (Middle name)

Exact Title THE DEVELOPMENT OF AREA VOCATIONAL SCHOOL PROGRAMS IN NEW YORK STATE.

Degree granted Ed.D., Date 1949, No. of pages in report 284

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To survey the need for the creation of area vocational schools in New York State.

Source of data and method of study:

Survey of needs, potentialities, legislation, and administrative agencies required pertinent to the problem. Data secured by information gathered concerning existing area vocational schools, study of all existing written material plus the gathering of more by personal visitations, correspondence, library research and first hand information.

Findings and Conclusions:

Definite recommendations are made for the development of such a program as the following: A State plan offered, united leadership among State and local officials, more financial aid in the development of area vocational schools programs on the high school level, the combining of small localities for the establishment of such schools, larger area schools offering courses for surrounding localities.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Musgrove, William, R.
(Last name) (First name) (Middle name)

Exact Title Relationship of Occupational Experience, Teaching Experience, College Training and Technical Training to Rated Effectiveness of Vocational Electronics Teachers.

Degree Granted Ed. D., Date ____ No. pages in report ____

Granted by University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: While the primary purpose of the study was to ascertain the relationship between electronic occupational experience and the teaching effectiveness of vocational electronics teachers, the study also sought to ascertain the relationships between the amounts of teaching experience, college training and technical training and the rated effectiveness of vocational electronics teachers.

Source of Data and Method of Study: The study was conducted as a type of ex post facto research wherein the dependent variable of teacher effectiveness was measured and then the independent variables of occupational experience, teaching experience, college training and electronic technical training were examined in retrospect for their possible relations to teacher effectiveness. The biographical data used in the study were secured by means of information forms that were completed by 210 vocational electronics teachers from eight similar states; Alabama, Georgia, Iowa, Kentucky, Minnesota, Missouri, Washington and Wisconsin. Teacher effectiveness ratings were obtained through the cooperation of 3,148 individuals who completed and returned the following researcher-developed instruments: (1) Teacher Rating Scales were completed by 200 supervisors, (2) Self-Evaluation Scales were returned by the 210 teachers, and (3) Teacher Effectiveness Scales were returned from 2,738 students. Statistical tests were conducted on one independent variable at a time using scores from one type of rating scale at a time. One-way analysis of variance statistical tests were computed to ascertain whether or not there was any significant difference among the mean teacher effectiveness scores when arranged according to various amounts of occupational experience, teaching experience, colle training and electronic technical training.

Findings and Conclusions: Although the teacher self-ratings indicate a positive relationship between occupational experience and teacher effectiveness, the supervisor and student ratings show no significant relationship. Inasmuch as the supervisor ratings, the student ratings and the teacher self-ratings obtained in this study indicated that there is no significant relationship between the amount of electronics technical training and subsequent rated teacher effectiveness it would appear that a simple measure of the quantity of electronic technical training is not likely to be indicative of teacher effectiveness in this area.

SOURCE SHEET OR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Oakley, Hugh, L.
(Last name) (First name) (Middle name)

Exact Title THE RELATION OF GUIDANCE AND CONCOMITANT ATTITUDES TO SPECIALIZED TRADE AND INDUSTRIAL SCHOOL TRAINING IN KANSAS CITY.

Degree granted Ed.D. Date 1954 No. of pages in report 216

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the bearing of guidance and concomitant attitudes of students, principals, vice-principals, counselors, teachers, and parents of the Kansas City, Missouri, Public Secondary Schools on the operation of the Trade Preparatory Division of the Manual High and Vocational School of that city.

Source of data and method of Study:

Data were obtained from school records and information forms from schools of Kansas City, Missouri, as follows: 686 general high school students; 171 trade preparatory students; 80 trade preparatory drop-outs; 75 trade preparatory parents of Manual High and Vocational School; nine principals, nine vice-principals, nine counselors; 153 teachers, and 294 parents of the regular junior and senior high schools.

Findings and Conclusions:

Less than half the general high school students had made an occupational choice. Chief reasons why more students had not selected their occupation were lack of occupational information and vocational counseling. Both the general high school and trade preparatory students consider trade preparation worthwhile, but only a small percentage expect to pursue such training at Manual High and Vocational School. They believe that such courses should be offered in the regular high school or in a more modern technical high school. A large majority of the students who drop out of the trade preparatory program do so during or by the end of their first year of training and only a small minority work in the trade for which they had trained at Manual. Principals, vice-principals, counselors, teachers, and parents consider trade preparatory training worthwhile for non-college bound youth; they believe such courses should be offered in the regular high school. They also believe that the trade preparatory program at Manual High add Vocational School has not been successful in meeting the needs of youth with respect to that type of training. Trade preparatory parents believe the program has been successful. Principals, vice-principals, and counselors believe the public schools of Kansas City have been fairly successful in providing vocational guidance relating to occupations and trade preparatory training. The teachers' opinions were to the contrary.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Ohlson (Last name), Eli (First name), E. (Middle name)

Exact Title A COMPARISON OF THE SUCCESS OF CO-OPERATIVE AND NON-CO-OPERATIVE VOCATIONAL HIGH SCHOOL ELECTRICAL STUDENTS IN EMPLOYMENT.

Degree granted Ed.D., Date 1943, No. of pages in report ____

Granted by University of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study of the value of co-operative education and whether work experience interferes with attaining nonvocational ideals in after school life.

Source of Data and Method of Study:

Findings and Conclusions:

546

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Olivo (Last name), C. (First name), Thomas (Middle name)

Exact Title AN EVALUATION OF THE ADEQUACY OF THE PROGRAM OF VOCATIONAL EDUCATION IN ERIE COUNTY, NEW YORK.

Degree granted Ed. D., Date 1954, No. of pages in report 145

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain how the present programs of vocational education in Erie County were meeting current and projected labor market needs for trained workers; and, as the data revealed inadequacies, to recommend revised programs of such vocational education.

Source of data and method of study:

Data were secured through an occupational survey of 435 firms in Erie County, U. S. Bureau of the Census Occupation population data, survey of training facilities, labor market studies in New York State, Federal, State, local vocational education research studies, and resource material.

Findings and Conclusions:

The vocational education facilities in Erie County varied from those having more equipment than the demand for training justified to programs which were inadequate. Recommendations were made for new programs and combined programs to better utilize existing facilities.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Olsen, (Last name), Edward (First name), G. (Middle name)

Exact Title SOCIAL ECONOMICS FOR INDUSTRIAL WORKERS.

Degree granted Ed.D., Date 1937, No. of pages in report

Granted by Columbia University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C

Purpose of Study:

The preparation and description of a study guide adapted to the needs of the publicity supported trade and industrial training classes already existing in the state of Ohio.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Olsen, Fred, Alfred

Exact Title INDUSTRIAL ARTS IN THE PUBLIC SECONDARY SCHOOLS OF THE STATE OF WASHINGTON.

Degree granted Ph. D., Date 1962, No. of pages in report 222

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine current status and trends of industrial arts in the public secondary schools of the state of Washington, and to be helpful to prospective and practicing teachers, teacher educators, and administrators.

Source of Data and Method of Study:

A questionnaire was prepared and mailed to each teacher in the state of Washington who taught at least one industrial arts course. A total of 74.9 percent responded. Compilation consisted of a presentation of data in 7 figures and 74 tables. Frequencies and percentages were used throughout and where appropriate, cumulative percentages and weighted means were used to further describe the data.

Findings and Conclusions:

1. As a result of this descriptive-survey technique, substantial evidence was acquired relative to personal data on industrial arts teachers; non-industrial arts activities; philosophy and methodology of industrial arts teachers.
2. Concerning non-industrial arts activities, frequencies and percentages of participation were determined relative to extra-curricular activities; school committee participation; and teaching combinations.
3. In regard to philosophy of industrial arts, and values held by the respondents were ascertained and ranked by weighted means. The objectives attained were ranked in like manner and a comparison was made between values and practice.
4. Concerning methodology, it was possible to determine where teachers placed their emphasis upon instruction; the guides they used for organization and teaching; and which activities, audio-visual materials, and devices they commonly used. Also determined were the instructional qualifications of teachers on the basis of their own-self evaluation.
5. Throughout the study, industiral arts teachers' reactions to statements dealing with role satisfaction were presented and statistically examined for trends.

a

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Olson (Last name), David (First name), Olin (Middle name)

Exact Title AN EXPERIMENTAL STUDY TO DETERMINE SUCCESS OF PERFORMANCE WITH SELECTED WOODWORKING HAND TOOLS BY CHILDREN WITH SPECIFIC LEARNING HANDICAPS.

Degree granted ________, Date ________ No. of pages in report ____

Granted by Texas A&M University (Name of institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C ( )

Purpose of Study:

To determine whether educable mentally retarded pupils could perform certain woodworking skills with a measurable degree of proficiency following instructions and training in the use of those tools.

Source of Data and Method of Study:

Tools that were frequently used in basic hand woodworking were selected and tests were developed to measure the proficiency with which pupils could manipulate these tools. Manipulative pretests and posttests were given to each pupil participating in the study. After the pretest was administered to these pupils, instruction for a period of eight weeks was given on the use and manipulation of each tool.

Findings and Conclusions:

The following recommendations are based on the results of the analysis of the data collected and observations made throughout each phase of study--pretesting, instruction, and posttesting.

1. Industrial arts should be a regular subject for all classes of educable mentally retarded pupils and should be the same for both boys and girls.
2. The facilities should be adequate, but they do not necessarily require a special laboratory.
3. Demonstrations and lectures should be limited to five or seven minutes in length.
4. Tools should be carefully selected for purchase.
5. Integration of related information in other subject areas helps to stimulate and reinforce the learning for the student and should be encouraged.

550

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Olson (Last name), Delmar (First name), Walter (Middle name)

Exact Title TECHNOLOGY AND INDUSTIRAL ARTS: A DERIVATION OF SUBJECT MATTER FROM TECHNOLOGY, WITH IMPLICATIONS FOR THE INDUSTRIAL ARTS PROGRAM.

Degree granted Ph. D. ,Date 1957 ,No. of pages in report 342

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To find a body of subject matter for industrial arts which would be reflective of the technology. This would be in contrast to a body of subject matter reflective of handicraft. Elements of the subject matter, called curricular components, were the objects of the search.

Source of Data and Method of Study:

An extensive analysis of the eight categories, and then each of these were first broken down into twenty-six categories and analyzed in outline form. From these analyses, 526 curricular components were derived and listed. These were reduced to 92 by the elimination of like terms, and this group was adopted as the master list of curricular components.

Findings and Conclusions:

Implications from this new subject matter were pointed at the industrial arts program, specifically at the elementary and secondary school levels, the adult, collegiate, and teacher education levels, and the industrial arts teacher, the laboratory, the pupil project, industry industrial arts teacher education, and the profession itself.

The total impact on industrial arts resulting from such a body of subject matter reflactive of the technology, if conceivable, would likely call for a major redirection of the program.

SOURCE SHEET FOR SUMMARIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Olson (Last name), Jerry (First name), Carl (Middle name)

Exact Title THE GUIDANCE FUNCTION OF INDUSTRIAL ARTS IN TEACHER EDUCATION.

Degree granted Ph. D., Date 1964, No. of pages in report 372

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To provide information which would give insight into the evolution of industrial arts and guidance in higher education, the role of the guidance function in industrial arts education at the public school level, and the content and processes of student personnel activities.

Source of Data and Method of Study:

The exploratory method was used to study the evolution of industrial arts; the descriptive method dealt with pertinent guidance concepts for industrial arts; a normative survey and status study was conducted to gain information about the investigator was able to summarize the most important and significant concepts through statical and analytical means.

Findings and Conclusions:

The most obvious conclusion supports the hypothesis that educational and vocational guidance is a definite objective of industrial arts teacher education. However, a null hypothesis which states that there is no significant difference between what the students and chairmen think is desirable and what is actually being practiced must be rejected.

The findings showed that a significant difference existed between the opinions and practices expressed by students for every concept on their questionnaire. Such findings should cause concern for the profession and require immediate action.

The study ranked the importance of specific ways for meeting the guidance function: 1. stimulating interpersonal relationships in the classroom, 2. providing exploratory experiences, 3. providing problem-solving and creative activities, 4. increasing the students appreciation as consumers, of the value and dignity of industry, 5. providing for educational guidance, 6. helping students determine standards of excellence, 7. providing for self-understanding, 8. providing for orientation to the world of work, and 9. helping students plan for the future.

, 552

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author O'Neill, (Last name), Jack (First name), Henry (Middle name)

Exact Title AN ANALYTICAL SURVEY OF PERSONNEL PRACTICES IN FIFTY-SEVEN INDUSTRIES IN INDIANA.

Degree granted Ph.D., Date 1954, No. of pages in report 210

Granted by University of Michigan (Name of institution) Ann Arbor, Michigan (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the differences and similarities of personnel practices in industry with those of modern secondary schools.

Source of Data and Method of Study:

Data were obtained from a questionnaire submitted to a jury of selected personnel men for evaluation. The questionnaire and an explanatory letter were then sent to those Indianapolis, South Bend, Mishawaka, and Elkhart industries which were classified in Division D., manufacturing, in the STANDARD INDUSTRIAL CLASSIFICATION MANUAL.

Findings and Conclusions:

While many interesting variations in practices were found in individual instances, the standard statistical method of testing hypotheses shows that the degrees of variation are of such proportions as to verify, at least in most cases, the conclusions that practices are more uniform than disparate in each of the five categories of the study. By and large, there is a degree of "unity in diversity" of personnel practices among the fifty-seven industries which provided data. Their operations reveal a loose pattern of practices within which specific variations are numerous and largely governed by chance variations.

553

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Osburn, (Last name), Burl (First name), Neff (Middle name)

Exact Title ADULT EDUCATION IN HANDICRAFTS IN THE UNITED STATES.

Degree granted Ph.D., Date 1939, No. of pages in report 286

Granted by Ohio State Univeristy (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An historical study of handicrafts in America. From historical documents, social work organizations, and interviews, data is gathered to point up the many values which may be attributed to this subject.

Source of Data and Method of Study:

A list of social work organization which included adult handicrafts was compiled. All state directors of W.P.A. and all state directors of vocational education were included in the study. Data were gathered through questionnaire and interviews from these sources.

Findings and Conclusions:

Three services are outstanding in the handicraft work of the agencies studied: the preservation of early arts, the promotion of health, and the effort to provide economics security.

Agencies give instruction on the techniques of different crafts, subsidize handicraft workers, hold folk festivals and similar exhibits. Occupational therapists use handicraft techniques to maintain or restore mental equilibrium, to stimulate functional restoration of some injured part, and to promote general physical upgrading. Recreational organizations are employing handicraft activities to accomplish their aims.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCAITON
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Otterson, Peder, Adolph
(Last name) (First name) (Middle name)

Exact Title AN EVALUATION OF THE AEROSPACE TECHNOLOGY PROGRAM AT KENT STATE UNIVERSITY.

Degree granted Ph. D. Date 1969 No. of pages in report

Granted by The Ohio State University Columbus, Ohio
(Name of Institution) (City, State)

Where Available· Microfilm ( ) Microfiche ( ) E.R.I.C ( )

Purpose of Study·

The study was undertaken to evaluate the Aerospace Technology program at Kent State University.

Source of Data and Method of Study·

Two questionnaires. The first instrument was a curriculum survey that was sent to technical personnel of 100 areospace industries. The same instrument was also mailed to 112 graduates of the Kent State University Aerospace Technology Program.

Findings and Conclusions·

The findings indicate that the aerospace technology program at Kent State University is fulfilling its purpose in preparing students for professional positions in the aerospace industries. Ninety-three per cent of the graduates are employed in aerospace or related firms. Of this group 56% are in engineering type positions and 31% are in professional flight crew status. The level of responsibility and expectations for advancement reported by the graduates indicate successful performance and a remuneration comparable to individuals that are graduates of engineering schools.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Oxley, Vincent, E.
(Last name) (First name) (Middle name)

Exact Title TRADE AND TECHNICAL INSTRUCTIONAL MATERIALS; THEIR STATUS, PREPARATION, AND USE.

Degree granted Ed. D. Date 1969 No. of pages in report ______

Granted by University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain (1) current practices of state departments of education and instructional materials laboratories concerning the preparation and destribution of instructional materials for trade and technical education, (2) qualifications of writers of these materials, (3) how production of these materials is financed, (4) how extensively trade and technical teachers use such materials, (5) how experienced teachers, degree teachers, and teachers who have taken courses in instructional materials preparation compare with their counterparts of the opposite qualifications in their use of such materials, and (6) what features trade and technical teachers value in instructional materials.

Source of Data and Method of Study:

Information forms were perfected and sent to the state departments of education, the twenty instructional materials laboratories, and to 1,096 trade and technical teachers to secure data pertaining to the status, preparation, and distribution of instructional materials. Data obtained from teachers pertained to their use of these materials and the features which they believed were desirable in them. The former were reported in frequencies and per cents; the latter were subjected to a Mann-Whitney-U test and significant differences were reported.

Findings and Conclusions:

State departments of education realize the importance of and their responsibility to the development and production of instructional materials but they have been more concerned with producing needed materials than with adopting or adapting ex existing materials. Most laboratories have employed competent personnel and maintained high standards of quality in producing instructional materials. Demand for instructional materials will probably increase. Teaching experience [illegible]ly apparently is the variable which most significantly affects the manner in which teachers use instructional materials although experience, degrees, and courses taken in the preparation and use of instructional materials all influence teachers to use such materials and also to plan, more carefully, their use.

556

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Page (Last name), Charles (First name), Bradley (Middle name)

Exact Title FACILITIES REQUIRED TO MEET FUTURE DEMANDS FOR INDUSTRIAL ARTS TEACHERS IN CALIFORNIA

Degree granted Ed.D., Date 1953, No. of pages in report 218

Granted by Colorado State College of Education (Name of institution) Greeley, Colorado (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To provide data concerning the adequacy of present and planned facilities in order that the California State Department of Education may plan and provide further facilities for the preparation of industrial arts teachers.

Source of Data and Method of Study:

Data were secured through a questionnaire from California school directories, projections of secondary school population, the School Planning Office of the State Department of Education, and from the Registrars of four institutions of higher learning.

Findings and Conclusions:

Present and planned facilities for preparing industrial arts teachers in California are adequate to supply the maximum number of industrial arts teachers needed through the peak years to 1965-1966, providing the average attendance of new teachers does not exceed 2.3 years at the state institutions which prepare industrial arts teachers for the special secondary credential, no less than 16 per cent of the new industrial arts teachers come from other states, and a maximum of 24 full time equivalents per laboratory is a feasible rate of utilization of facilities. A continued and intensified program of recruitment of capable industrial arts majors at Chico, Fresno, Santa Barbara, and San Jose will be necessary to enable these schools to supply the numbers of industrial arts teachers needed in the immediate future.

557

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Paine (Last name), Harry (First name), W. (Middle name)

Exact Title REVISION OF A CURRICULUM IN A VOCATIONAL HIGH SCHOOL BY MEANS OF THE TRADE AND ANALYSIS APPROACH.

Degree granted Ed. D., Date 1943, No. of pages in report 470

Granted by University of Michigan (Name of institution) Ann Arbor, Michigan (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This research covered a period from 1939 to 1943 and concerns the revision of a curriculum for a vocational high school as a part of the over-all curriculum revision work of the school. It outlines techniques and procedures followed to secure a valid analysis and workable, intercorrelating course outlines. The appendix of the dissertation presents the analysis, followed by shop and related subject course outlines, as well as sample instruction sheets of various types used to facilitate the teaching of the content suggested by the outlines.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Paine, Olive, ______
(Last name) (First name) (Middle name)

Exact Title AN EXPERIMENTAL STUDY OF TWO METHODS OF TEACHING MANUAL ARTS IN THE FIRST GRADE.

Degree granted Doctors, Date 1930, No. of pages in report ____

Granted by Yale University New Haven, Conn.
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE -AIAA - ACIATE - NAITTE

Author Palmer (Last name) Harold (First name) G. (Middle name)

Exact Title THE IMPROVEMENT OF INDUSTRIAL ARTS EDUCATION IN IOWA FROM 1940-1950 WITH SPECIAL REFERENCE TO ONE-TEACHER PROGRAMS.

Degree granted Ph. D. Date 1950 , No. of pages in report 282

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available Microfilm ( ) Microfiche ( ) E.R.I.C ( )

Purpose of Study:

To discover: (a) the nature of industrial arts programs in Iowa, (b) the relationship of teacher education programs to the Iowa programs, (c) how associational leadership has assisted in the development of the programs (d) how the State Department has assisted (e) how public relations programs have helped.

Source of Data and Method of Study:
The source of data were obtained from thirty-three teacher industrial arts programs in the state of Iowa. The interview technique was employed using a survey instrument developed by the writer.

Findings and Conclusions

1. The thirty-three much improved schools were located in twenty counties. There should be more developmental activity in the other seventy-seven counties.
2. More work should be done in curriculum development.
3. Teacher education should develop physical settings, programs and leadership to reflect the true nature of industrial arts education.
4. Certification standards should be raised.
5. Experience with materials should become a part of the general education undergraduate program.
6. The development of a more positive concern for the profession as a whole presents a major concern.
7. There is a need of a fifth year program in industrial arts education.
8. Provision should be made for in-service credit on-the-job growth,

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDSUTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Pankowski, Dallas, John
(Last name) (First name) (Middle name)

Exact Title AN ANALYTICAL STUDY OF THE CONTENT OF FOUR SELECTED JUNIOR-SENIOR HIGH SCHOOL ELECTRICITY-ELECTRONIC TEACHING SYSTEMS WITH RECOMMENDATIONS BY ELECTRICAL SPECIALISTS.

Degree granted Ed.D., Date 1966, No. of pages in report 137

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the content of four electricity-electronic teaching systems and to compare this content with that recommended by electrical specialists.

Source of Data and Method of Study:

The textbooks and laboratory manuals of the teaching systems under study were analyzed for electrical prinicples, manipulative operations, sequential arrangement of content, electrical test equipment, and readability of printed materials. The electrical principles were rated by jury of twelve specialists composed of authors or co-authors of industrial arts electrical books and the electrical test equipment was compared to a list of most frequently used industrial equipment.

Findings and Conclusions:

1. The teaching systems should be redesigned to included a greater number of the sixty-four electrical principles indicated by specialists to be important to the course of instruction.

2. The teaching systems should be redesigned to exposed the student to a greater number of pieces of commonly used electrical test equipment.

3. The advertised claims of the teaching systems as suitable for junior high school instruction is not valid as close to fifty percent or more of the textbook and laboratory reading material was rated at the senior high school level with considerable amounts of material at the college level.

561

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author: Papp, Alexander, George
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF TWO APPROACHES TO TEACHING ORTHOGRAPHIC PROJECTION AT THE COLLEGE LEVEL.

Degree granted ______ Date ______ No. of pages in report ____

Granted by University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain whether or not those students who initiated and incorportated the whole method of solving orthographic projection problems achieved significantly different perfomance scores, as measured by tests of spatial relations, technical information and orthographic projection, than those students who employed the part method of solving orthographic projection problems. More specifically this study was designed to ascertain the relative effectiveness of the instructional approaches on the following criterion variables: (1) ability to solve for missing orthographic projection when only two orthographic views were given, (2) ability to construct a three view orthographic projection drawing from a pictorial drawing, (3) ability to understand technical information, (4) ability to add missing lines in orthographic projected views, (5) ability to solve orthographically projected spatial relations problems concerned with deduction, (6) ability to solve orthographically projected spatial relations problems concerned with similarities, and (7) attitude toward the course.

Source of Data and Method of Study:

This four week investigation involved four groups of students who were enrolled in engineering drawing at the University of Missouri-Columbia during the second semester of 1968-69. Two laboratory instructors each taught an experimental and control group. Comparisons were made between the two groups who used the whole method and two groups who used the part method of learning selected elements of engineering design.

Findings and Conclusions:

Identification of an approach that would contribute to the development of significantly superior achivement of orthographic projection was not demonstrated by either of the two instructional approaches employed in this investigation. The whole method and part method were not differentially effective in developing the ability to solve graphics problems related to orthographic projection. Neither the whole method nor the part method were differentially effective in developing the ability to understand technical information related to orthographic projection. Neither the whole method nor the part method were differentially effective in developing the ability to understand spatial relations.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Pardini, Louis, J.
(Last name) (First name) (Middle name)

Exact Title The Content of Industrial Arts Metal Classes as Compared to Modern Industrial Practices.

Degree granted Ed. D., Date Spring 1967 No. of pages in report 136

Granted by Colorado State College Greeley, Colorado
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To find the extent to which the metals curricula in Colorado secondary schools are representative of modern industrial technological practices.

Source of data and method of study: Data was obtained by means of two separate questionaires. The first questionaire was designed for metal processing industries selected from Thomas Register of American Manufacturers. The second questionaire was designed for industrial arts teachers who included instructional units relating to metal processing in their course content. A comparison was made of the responses from industry and from the teachers to determine the extent to which American industry is represented in the industrial arts curriculum.

Findings and Conclusions: (1) Colorado public secondary schools were only partially interpreting the metal working process of industry to youth. Only the basic machine tools were utilized to present instructional units in machine tool processes. (2) Industrial arts metalworking teachers in Colorado do not present instructional units on the newer and more sophisticated processes. They are not taking advantage of the diverse methods of lesson presentation. The majority of teachers keep up with technological developments by reading current literature relating to industry.

To interpret American industry adequately, industrial arts teachers must utilize a greater variety of teaching methods, thereby expanding the sources of course content. Excellent interpretations of industry can be made through the use of mock-ups, working models, films, filmstrips, resource persons, and visits to industry.

563

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Parkes (Last name), George (First name), H. (Middle name)

Exact Title THE COMPARATIVE COST OF VOCATIONAL INDUSTRIAL EDUCATION IN CERTAIN SECOND-CLASS SCHOOL DISTRICTS IN PENNSYLVANIA

Degree granted Ed.D., Date 1939, No. of pages in report 130

Granted by Pennsylvania State College (Name of institution) State College, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study to compare the contributions of the Commonwealth and the local second-class districts toward the support of local programs of vocational industrial education in an effort to validate a system of accounting which shows net total operating cost.

Source of data and method of study:

Findings and Conclusions:

564

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Nagle, (Last name), Roland (First name), Frank (Middle name)

Exact Title STATUS AND OPINIONS OF ADULT EDUCATION IN THE PUBLIC SCHOOLS OF MISSOURI

Degree granted ____________, Date __________, NO. of pages in report ______

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the status of adult education in the public schools of Missouri and to obtain opinions and attitudes of adults toward this phase of education.

Source of Data and Method of Study:

Data concerning the status of adult education were obtained from the State Department of Education, Jefferson City, Missouri, and by means of information forms. Data concerning the adult students and their opinions and attitudes were obtained from information forms completed by 1,112 adults participating in adult education at time of study.

Findings and Conclusions:

Adult education classes are offered by the public schools in towns and cities of nearly all sizes throughout the state. Reimbursable classes represent approximately three-fourths of the total enrollment; however, more growth has taken place in non-reimbursable classes in recent years. As many adults in out-state Missouri attend adult education classes as do adults in Kansas City or greater St. Louis. Persons representing every type and level of work and a wide range of ages attend adult classes. The greatest number fall in the 21 to 35 age group and are more advanced in years of schooling than the total adult population of the state. Men are more apt to enroll in adult classes for occupational reasons, while women are more apt to enroll in courses for self improvement and leisure time activity. Adults are about evenly divided as to whether they should pay all expenses of the adult program or rely on some public aid in addition to student fees. Adults are unfavorable to the idea of local taxation for adult education; however, their attitudes toward the use of state funds are most favorable.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Nair, Ralph, Kenneth
(Last name) (First name) (Middle name)

Exact Title PREDICTIVE VALUE OF STANDARDIZED TESTS AND INVENTORIES IN INDUSTRIAL ARTS TEACHER EDUCATION

Degree granted Ed.D., Date 1950, No. of pages in report 147

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the effectiveness of a group of standardized tests and inventories in predicting achievement in certain technical courses of college grade commonly required of industrial arts teachers.

Source of Data and Method of Study:

A group of six standardized tests and inventories was administered to 367 industrial arts students at three California colleges. Using as the criterion letter grades assigned by instructors in drafting and shop work, the study utilized two major types of statistical treatment: Correlation and prediction of the relationship between performance on the tests and the criterion; multiple, factors analysis of the test indicating higher degrees of predictive value.

Findings and Conclusions:

Drafting and shop grades can be predicted with only a slight degree of reliability when these six tests and inventories are used. The best combination of predictors was found to be the "California Short-Form Test of Mental Maturity" and Bennett's "Test of Mechanical Comprehension." Almost all of the standardized measures used indicated more positive relationship with drafting grades than with grades in shop work. The mental maturity test, in either its language or non-language section, along with the"Detroit Mechanical Aptitudes Examination" and Bennett's "Test of Mechanical Comprehension" had the highest and most consistent mutual factor loadings with drafting and shop grades.

566

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Nealis (Last name), Michael (First name), Francis (Middle name)

Exact Title THE DEVELOPMENT OF A TENTATIVE VOCATIONAL EDUCATION TRAINING PROGRAM FOR THE MOUNT VERNON (N. Y.) PUBLIC SCHOOLS BASED UPON A SURVEY OF THE OCCUPATIONAL DISTRIBUTION OF RESIDENTS OF THAT COMMUNITY.

Degree granted Ed.D., Date 1951, No. of pages in report 148

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To examine the current program of vocational education in the city of Mount Vernon, to ascertain whether it was meeting accepted trades standards, if there were occupational opportunities for students in the program, and to make recommendations for improvement based on findings.

Source of data and method of study:

Data were secured from U. S. Census Reports, Reports of N. Y. State Agencies, Local Chamber of Commerce and Board of Trade, Reports and Conferences with Trades Commissions, Labor Market Studies, Investigation and Report, Critical Evaluation of present program, questionnaire, statistical analysis and job and course of study analysis.

Findings and Conclusions:

This study presents definite numerical and job classifications, a description of employment distribution, and estimated annual worker replacement schedule and a description of occupations occurring in the labor market area. It further indicates the manner in which the present training program is correlated with job opportunities and occupational requirements, presents recommendations for course modifications, and emphasizes by-products pertinent to cultural and citizenship education which are concomitant to a program of training in skills.

567

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Neff, William, L.
(Last name) (First name) (Middle name)

Exact Title A STUDY OF FEDERALLY REIMBURSED VOCATIONAL EDUCATION IN THE STATE OF NORTH DAKOTA.

Degree granted Doctors, Date 1941, No. of pages in report ______

Granted by Stanford University Stanford, California
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpsoe of Study:

Source of Data:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Nelson (Last name), A. (First name), Frank (Middle name)

Exact Title FOLLOW-UP STUDY OF INDUSTRIAL ARTS GRADUATES OF NORTH TEXAS STATE COLLEGE.

Degree granted Ed.D., Date 1955, No. of pages in report 177

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the professional status and location of the industrial arts graduates of North Texas State College, to obtain some measure of the effectiveness of the training they received, to secure their suggestions for the improvement of the program of industrial arts at the college, and to furnish data upon which authorities might justify changes in the present program.

Source of data and method of study:

Information was obtained by the use of information forms returned by 67.5 per cent of the 833 graduates whose addresses were obtained from the official records at North Texas State College.

Findings and Conclusions:

A majority of all respondents were in the teaching profession. Almost 37 per cent had completed an advanced degree. The most frequently mentioned educational activity reported was teaching of industrial arts followed by administration work. The largest per cent of respondents in industrial positions were employed in some phase of the aircraft industry. The industrial arts course considered by the respondents to be of most value to them was mechanical drawing. Elementary electricity was selected by more respondents than any other as being a course that would have aided them in their work. Instruction in electricity, automobile mechanics, and upholstering and wood finishing should be made available to all industrial arts majors whenever possible. A more effective program in guidance and counseling should be made available. Consideration should be given to providing a curricula of terminal education for those planning to enter industrial occupations. Students should be encouraged to take work in the fields of art, guidance, business administration, speech, and physics.

569

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Nelson, Hilding, E.
(Last name) (First name) (Middle name)

Exact Title OCCUPATIONAL SELF IMAGES OF TEACHERS: A STUDY OF THE OCCUAPTIONAL INVOLVEMENTS AND WORK-ROLE ORIENTATIONS OF MICHIGAN INDUSTRIAL EDUCATION TEACHERS.

Degree granted Ed. D., Date 1962, No. of pages in report

Granted by MIchigan State University East Lansing, Michigan
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To assess the kinds of occupational involvements of Michigan junior high school industrial education teachers, and their major work-role orientations are related to specific factors identifiable in their social occupational and educational backgrounds. In essence, it seeks to asses the self-images that teachers hold in relation to their work situation.

Source of Data and Method of Study:

The population included in this study was taken from the total population of junior high school (grades 7-9) teachers in Michigan public schools. From a total population of 379 teachers, 230 were directly represented in this study. The first stage in the study involved identification of the teacher self-images. For this assessment, two inventories were used: (1) Dr. Robert Dubin's "central life interest" inventory, and (2) a major work-role inventory developed by the investigator. The second stage in the study sought to relate the noted occupational involvements (Dubins inventory) and role orientations to fifteen environmental factors. The chi square statistic was used throughout the study to test observed distributions at the .05 level of significance

Findings and Conclusions:

1. The teachers- typically, did not view their occupation as their major "central life interest."
2. They tended to be committed to the methodology and activities prescribed by the organization for accomplishing the work tasks.
3. They tended to be committed to the fulfillment of the minimal rules, regulations, and procedures required by the work organization.
4. They tended to use their own objectives as guides for actually carrying-out work tasks whenever possible--they are non-job committed in the non-formal work behavior sector.
5. They tended to prefer primary, interpersonal contacts with persons outside the occupation.
6. Their "central life interest" (total job involvement) did not have notable interdependence with any of the study variables.

570

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Nelson, Howard, Frederick
(Last name) (First name) (Middle name)

Exact Title THE RELATIONSHIP BETWEEN A MEASURE OF GENERAL INDUSTRIAL ARTS INFORMATION AND SELECTED FACTORS RESIDENT IN THE TEACHER, IN THE PUPIL, AND IN THE SCHOOL.

Degree granted Ed.D., Date 1953, No. of pages in report 203

Granted by University of Kansas Lawrence, Kansas
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To gain an estimate of the influence of selected factors about the teacher, pupil and school on the industrial arts knowledge possessed by senior high school boys from a representative sample of Kansas high schools.

Source of Data and Method of Study:

Data were obtained from scores on the Terman-McNemar Test of Mental Ability, and Essential High School Content Battery, and the Nelson Inventory of General Industrial Arts Background for senior high school boys from a representative sample of forty-two. Data concerning the schools and teachers were obtained from public records of the State Department of Education. Data were analyzed by the technique of analysis of variance and covariance.

Findings and Conclusions:

Boys scored significantly higher on the inventory when: teachers were in the upper quarter in a distribution of semesters of training; teachers had four units of high school industrial arts; teachers taught only industrial arts classes; teacher received highest salary recorded for one-man departments; teachers had at least three years' experience but not over ten; enrolled in any size school other than one from 50 to 99; students increased their units of industrial arts courses; students had taken both junior and senior high school courses; students had taken any one course or combination of courses rather than none at all; students had work experience plus at least two semesters of course work; and students were enrolled in industrial arts rather than vocational agricultural courses.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Nelson (Last name), Lloyd (Middle name), Palm (First name)

Exact Title SELECTED FACTORS ASSOCIATED WITH HIGH SCHOOL STUDENTS' ORIGINAL INTEREST AND SUBSEQUENT DEVELOPMENT OF INTEREST IN A FAVORITE LEISURE-TIME ACTIVITY.

Degree granted Ed. D., Date 1955, No. of pages in report 235

Granted by University of Illinois (Name of institution) Urbana, Illinois (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To prepare an instrument which may be used to investigate factors associated with the hobbies of youth and to identify specific factors which seem to influence the origin and further development of hobby interests.

Source of Data and Method of Study:

49 students from one high school by means of an interview schedule to test 13 hypotheses relative to their favorite leisure-time activities. Four reliability checks were made of the instrument used.

Findings and Conclusions:

The mean age of initial hobby interest was 11.6 years; the median and modal age 12 years. The influence of friends and curricular activities in school seemed to affect first hobby interest and subsequent development slightly more than other factors. Development of skill in the hobby intensified interest also.

577

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Nelson (Last name), Rex (First name), A. (Middle name)

Exact Title PERSONALITY VARIABLES OF COLLEGE STUDENTS WHO SIGNIFY INDUSTRIAL ARTS AS A MAJOR FIELD OF EDUCATIONAL PREPARATION.

Degree granted Ed. D., Date 1963 No. of pages in report 176

Granted by Colorado State College (Name of institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To determine whether or not, on the basis of certain personality variables measured by the mean scores on the scales of the Edwards Personal Preference Schedule, differentiation could be made between the groups of industrial arts freshmen, industrial arts sophomores, industrial arts junior and the following groups: Edwards' normative group of college men, the group of industrial arts teachers used in Monroe's study, the group of industrial arts teachers used in Morgan's study, and the group of senior industrial arts majors used in Crist's study. Second, to determine whether or not, on the basis of certain personality variables measured by the mean scoresof the Edwards Personal Preference Schedule, a differentiation could be made between the six industrial arts personnel groups.

Source of Data and Method of Study:

The population of this study was limited to male freshmen, sophomore, and junior students who indicated industrial arts as a major field of educational preparation at four accredited midwestern and western teacher education colleges. Each male industrial arts freshman, sophomore, and junior was administered the Edwards Personal Preference Schedule.

Findings and Conclusions:

The general conclusions formulated from the findings of this study are that the Edwards Personal Preference Schedule: would effectively aid in the guidance of incoming college freshmen for a major in industrial arts education; can be used as an instrument for predicting success of industrial arts students in teaching industrial arts; can be used as an instrument for differentiating industrial arts personnel from the normative group of college men; and should not be used as an instrument for predicting academic success in the area of industrial arts.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Neubauer (Last name), Gerhardt (First name), William (Middle name)

Exact Title The Significance of Selected Aspects of Wood Technology For Western Culture.

Degree Granted Ph. D. Date 1956 No. pages in report 941

Granted By University of Minnesota (Name of Institution) Minneapolis, Minnesota (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To indicate how wood has conditioned man's effect upon certain aspects of his contemporary environment such as housing and furniture and to create a more adequate understanding of its industrial potential.

Source of Data and Method of Research: A bibliography was developed on the methodology of historical research and reporting. Historical literature having a social orientation was surveyed. A research bibliography was developed from Dutcher's "A Guide to Historical Literature" and the "Harvard Guide to American History." Government bulletins and documents, periodicals, pamphlets and brochures and old manuscripts also were used. Pertinent data were obtained from an appraisal of primary reference materials in the Library of Congress. Western history was divided into a number of periods, and the impact of significant developments in wood technology upon selected aspects of each period was analyzed.

Findings and Conclusions: Initially, technological progress stemmed from Egypt and lands of the West. No significant improvements in wood technology occurred between the time of the ancient Egyptians and the application of machine technology to wood processing. An economy of wood and agricultural economy are intimately related. Historically, wood has functioned as an important social leveler. Wood is related to craftsmanship rather than to industry; it is not a suitable resource upon which to found an age of exact science or upon which to base an economy reflecting machine technology, though a manipulation of its properties makes it an indispensable component of such an era.

Some pertinent conclusions and recommendations: More emphasis should be placed upon significant developments in wood technology in history courses and upon creative wooden art forms in humanities courses as evidence of man's drive for aesthetic expression. More emphasis should be placed upon the contemporary status of wood technology in general education courses and those concerned with the preparation of teachers. Traditional industrial arts woodworking courses should be modernized to incorporate new developments in wood technology. Wood technology should be taught as the applied science into which it has evolved. More emphasis should be placed upon functional design in courses concerned with wood fabrication so that the inherent physical properties of wood may be fully utilized.

574

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Newkirk, Louis, Vest
(Last name) (First name) (Middle name)

Exact Title VALIDATING AND TESTING HOME MECHANICS CONTENT.

Degree granted Doctors, Date 1929, No. of pages in report 41

Granted by University of Iowa, Ames, Iowa
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )
Interlibrary loan (x)

Purpose of Study:

Information not available.

Source of Data and Method of Study:

Information not available.

Findings and Conclusions:

Information not available.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Nichols, , Dwight , Wilson
(Last name) (First name) (Middle name)

Exact Title RESOURCE UNITS IN INDUSTRIAL ARTS TEACHER EDUCATION, WITH SPECIAL REFERENCE TO THE DEVELOPMENT AND USE OF A GRAPHIC ARTS UNIT ON BOOK PUBLISHING FOR JUNIOR HIGH SCHOOLS.

Degree granted Ph.D., Date 1955, No. of pages in report 250

Granted by Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To explore the concept of "resource units" as content and method in the preparation of Junior high school teachers of industrial arts and feature the development of a resource unit from the graphic arts industry called, Books.

Source of Data and Method of Study:

Data were obtained by the identification of hypotheses and their development through a study of the literature. These were based on postulates that have been presented by such leaders as Richards, Bonser, Warner, and others.

Findings and Conclusions:

The profession needs to raise its sights concerning subject matter penetration and method, especially concerning the development and use of resourse units. The rapidly evolving technology has progressed far beyond the practice of the industrial arts profession which mean that a coordinated program of curriculum research needs to be organized. The industries themselves need to be stimulated to participate more widely. Reorientation of technical and professional courses as well as refresher courses on bachelor's and master's level are needed. Literature needs to be developed on a research basis. One section of the resource unit on Books includes a total of thirty-three specific suggestions ranging from a variety of manipulative activities to a vocabularly analysis. It is rich in interest as well as integrational outcomes such as history, language, mathematics, science, vocation and industrial orientation.

576

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Nicholson, , David , Hull
(Last name) (First name) (Middle name)

Exact Title WHY ADULTS ATTEND SCHOOL--AN ANALYSIS OF MOTIVATING FACTORS.

Degree granted Ed.D., Date 1948, No. of pages in report 259

Granted by Univeristy of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

An extensive and detailed study of the reasons why adults attend school, analyzed in terms of age, sex, occupational choice, educational background, economic, marital, and veteran status. Needed improvements in adult education programs are suggested.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Nickerson (Last name), Paul (First name), Sumner (Middle name)

Exact Title THE USE OF RADIO AND SOUND EQUIPMENT IN SECONDARY SCHOOL INSTRUCTION.

Degree granted Ed. D., Date 1947, No. of pages in report 374

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A handbook which will serve as a practical guide to the effective use of radio and sound equipment as instructional aids in secondary education. Material is presented on student listening, script writing, broadcasting, and recording.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Nielsen (Last name), Erwin (First name), Eugene (Middle name)

Exact Title A COMPARATIVE ANALYSIS OF DOCTORAL DEGREE PROGRAMS IN INDUSTRIAL EDUCATION.

Degree granted Doctor of Education, Date 1969, No. of pages in report 210

Granted by: Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To make a comparative analysis of doctoral degree programs in industrial education in the United States of America, including the similarities and differences between Ed.D. and Ph. D. programs in industrial arts, trade and industrial education arts, trade and industrial education, and industrial-technical education.

Source of Data and Method of Study:

The questionnaire technique was used to gather data. A preliminary form was used to identify the population. The remainder of the questionnaire was divided into three parts one to each graduate dean, and two to each department head concerned. Data were reported statistically in terms of frequencies, means, ranges, and percentages. Some of the data were reported verbatim.

Findings and Conclusions:

Twenty-six departments cooperated. Three offered industrial arts only, four offered trade and industrial education only, and six offered combinations of two areas. Thirteen departments offered all three areas. There were seventeen departments in which to study for a Ph.D. and nineteen where an Ed.D. was available. The differences that existed in the total scope of industrial education at the doctoral level were not so pronounced between industrial arts, trade and industrial, and industrial technical education as they were within areas. Curriculum patterns--percentages of doctoral programs devoted to developing professional, technical, research, and general education competencies--were strikingly similar. The explicit lack of course requirements at the doctoral level indicated freedom to build programs appropriate to the background and needs of the individual student. The over-riding difference between the Ph.D. and Ed.D. programs was the arbitrary language requirement for the Ph.D.: none was required for the Ed.D. However, a trend was indicated toward requiring proficiency in other areas as a language substitute. Standard tests were required for admission in nearly all departments, but their use was not standard. Half of the departments used the scores as indicators only, and did not admit or reject on an arbitrary cut-off score.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Niemela, Albert, Weston
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL APPRENTICESHIP IN CONTRA COSTA COUNTY, CALIFORNIA.

Degree granted Ed.D., Date 1949, No. of pages in report 207

Granted by Stanford University Palo Alto, California
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To investigate the apprentice training program in Contra Costa County from the point of view of the guidance worker.

Source of Data and Method of Study:

The history of apprenticeship was studied with implications for the way it affects present apprenticeship programs. Apprenticeship standards in the various trades on a national basis were studied and compared with those of Contra Costa County. Some personal interviews were employed.

Findings and Conclusions:

Counselors should be thoroughly informed about the opportunities open to high school graduates through the avenue of industrial apprenticeship. Careers in skilled trades should become an integral part of the occupational information program. Educators should make a reappraisal of the place of the preapprentice training programs in the high schools.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Nilson, Kenneth, ______
(Last name) (First name) (Middle name)

Exact Title PHYSICALLY DISABLED PERSONS IN MINNESOTA AND AN ANALYSIS OF CERTAIN FACTORS IN THEIR EDUCATION AND VOCATIONAL REHABILITATION.

Degree granted Ph.D., Date 1931, No. of pages in report ____

Granted by University of Minnesota Minneapolis, Minnesota
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Noll (Last name), Robert (First name), Frances (Middle name)

Exact Title MATHEMATICS AND SCIENCE REQUIREMENTS FOR DRAFTING TECHNICIANS.

Degree granted Ed.D., Date 1967 No. of pages in report 260

Granted by Arizona State University (Name of institution) Flagstaff, Arizona (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The study was an exploratory study which had as its function the assessment of characteristics of a given situation, and to gain insight into the types of mathematics and science skills required of drafting technicians in the successful performance of their jobs.

Source of Data and Method of Study:

Three questionnaires were developed to: gather descriptive information from drafting technicians and drafting supervisors; to gather opinions of employment supervisors; and to gather opinions of community college instructors with respect to Math and Science requirements. A total of 229 drafting technicians, 116 drafting supervisors, 109 employment supervisors, and eighty-four community college insturctors responded to the survey.

Findings and Conclusions:

1. Findings reflected that the academic background in mathematics exceeded the academic background in science for both groups.
2. Analysis of incidents provided by drafting technicians and supervisors revealed that mathematics requirements included the following: basic mathematics skills, and knowledge of basis algebraic skills, basis geometric skills, and basic trigonometric skills. A total of sixty mathematics skills were identified as critical skills, however, less than one of eight were at a level beyond basic trigonometry.
3. Science skills identified through the analysis of incidents included the following: strength of materials, selection of metals, heat transfer, heat treatment of metals, surface finishes, elementary skills in physics, electronics, and basic chemistry skills. A total of sixty-three science skills were identified as critical skills, however, less than one in twelve were at a level beyond basic science skills.
4. Findings of this study lead to the recommendation that text material which is directly related to the mathematical and science skills used in actual job situations be emphasized in drafting training curricula in place of traditional collections of mathematics and science under the heading of technical mathematics and science.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Norman (Last name), Ralph (First name), Paul (Middle name)

Exact Title AN EXPERIMENTAL INVESTIGATION TO DETERMINE THE RELATIVE EFFECTIVENESS OF TWO DIFFERENT TYPES OF TEACHING METHODS IN ENGINEERING DRAWING.

Degree granted Ph. D., Date 1955, No. of pages in report 216

Granted by University of Minnesota. (Name of institution) Minneapolis, Minnesota (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the differential effects of two methods of instruction in engineering drawing.

Source of data and method of study:

Data were obtained by using a sample of 56 students randomly assigned to four sections in the beginning course in engineering drawing. Two of the sections first learned the basic principles of orthograph drawing through the medium of free-hand drawing and then proceeded to develop skill in instrument drawing. The other two sections made all of their drawings with drawing instruments.

Findings and Conclusions:

The experimental factor, freehand drawing, effected superior learning of the fundamental principles of orthographic drawing. A definite conclusion could not be reached in regard to the effectiveness of the instruction in developing the ability to draw freehand. The students who used the freehand drawing method were not penalized with respect to developing the skills necessary for satisfactory instrument drawings.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Nystrom (Last name), Dennis (First name), C. (Middle name)

Exact Title AN EXPERIMENTAL COMPARISON OF 16 mm SOUND ANIMATED FILMS AND CONVENTIONAL LECTURE-DEMONSTRATION METHODS OF TEACHING SELECTED UNITS IN ENGINEERING GRAPHICS.

Degree granted ________ Date May 1969 No. of pages in report ________

Granted by Texas A&M University (Name of institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the relative effectiveness of 16 mm sound animated films compared to the conventional lecture-demonstration method of teaching selected units in engineering graphics.

Source of Data and Method of Study:

The two methods of instruction were applied to 400 beginning engineering students enrolled in Engineering Graphics; 105 at Texas A&M University during the fall semester of 1968-69. No technique was employed to pair the students. Five instructors, each teaching two sections of students, were utilized in the study. To determine the students' impressions of the two methods of instruction, a student questionnaire was administered after the experiment was conducted. The data collected in the study were analyzed by a graphical analysis and an analysis of variance technique.

Findings and Conclusions:

35.2 percent of the students stated that they felt the animated film method assisted them in understanding the basic concepts of the selected units involved in the study.

The conclusions drawn from this research were based on the restrictions imposed by the experimental design. Statistical inferences were limited to the 400 beginning engineering students.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Parkhill, George, Dev[illegible]
(Last name) (First name) (Middle name)

Exact Title THE GENESIS, THE PRESENT STATUS, AND POSSIBLE DEVELOPMENT OF VOCATIONAL EDUCATION IN THE CITY OF NEW YORK.

Degree granted Ed. D., Date 1938, No. of pages in report 245

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An historical study of vocational education from 1900 to 1938. It includes the current needs of vocational education and its role in the city of New York. Federal and state laws regarding vocational education are described.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Parks, Gerald, A.
(Last name) (First name) (Middle name)

Exact Title INDUSTRY-EDUCATION MUTUAL INVOLVEMENT IN INDUSTRIAL TEACHER PREPARATION AND UPGRADING.

Degree granted Ed.D. Date June, 1969 No. of pages in report 302

Granted by Wayne State University Detroit, Michigan
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To identify and then describe prevailing patterns and promising practices of joint participation between teacher education institutions and the industries of the United States, (1) in the initial preparation of industrial education teachers, or (2) in upgrading of those already in service.

Source of Data and Method of Study:

Conduct of the study concentrated initially on ascertaining basic nation-wide mutual involvement data through written communication with 125 chairmen of industrial education departments. From the data assembled, concerning evidence of joint participation within the confines of this study, a panel of experts selected twelve plans, at nine different institutions, which were deemed especially worthy of in-depth study. Taped interviews with thirty-seven persons associated with the selected plans, were then conducted. A second national survey, in 1968, updated the data established two years earlier.

Findings and Conclusions:

1. There is a gap between the depth and the currency of knowledges and skills taught in industrial education departments, and those currently possessed by industrial workers.
2. Industry has adopted a cooperative attidtude toward mutual involvement activities.
3. Industry remains profit-conscious and participates in mutual involvement plans for the following reasons: (a) the possibility of enticing enough trainees away from non-industrial employment to justify expenses incurred, (b) because such trainees, who are preparing to teach, pay their way, (c) because the economic load of educational expense is shared through broad participation with similar industries organized into industrial societies, and/or (d) because properly educated teachers will eventually send better prepared students into industry.
4. In the plans involving employment, actual visitation by the coordinator to the work station is a factor to the success of the plan.
5. Students enrolled in mutual involvement plans believe they benefit from written work required of them during the course of such plans.
6. Except in federally-subsidezed plans, one of the greatest problems administrators face with mutual involvement plans is their adequate staffing in terms of released time for directors or coordinators.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Parnes, (Last name), Sidney (First name), J. (Middle name)

Exact Title A STUDY OF GENERAL BOOKS PUBLISHED FOR SUPERVISORS IN INDUSTRY BETWEEN 1920 AND 1950.

Degree granted Ph.D., Date 1954, No. of pages in report 238

Granted by University of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To analyze books published in the United States before 1951 for supervisors in industry, with emphasis on the human factors in supervision.

Source of Data and Method of Study:

Data were obtained through a documentary survey. By a delimiting process, 53 books were selected for detailed analysis.

Findings and Conclusions:

Authors of the books analyzed were found to represent chiefly four professions: management consultants, industrial executives, university professors, and vocational educators. Most often these writers designed their books as self-study aids for supervisors already on the job. Differences in emphasis were found between books ostensibly for foremen and the others. Although the number of books published has increased, little change has occurred in the general nature of the books over the 30 year period. Authors consistently stressed the idea that the same progress had to be made in the human factors of supervision as had already been accomplished in the technical aspects. Accordingly, 56.1 per cent of total subject matter in all analyzed books was found to be devoted to topics stressing the supervisor's managing of his personnel. Although increased usage was made of research findings in recent books, many of the analyzed publications contain numerous assertions for which no scientific evidence seems to be offered. It is concluded that much additional research appears to be needed in order to test the validity of these assertions.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Paster, Julius,
(Last name) (First name) (Middle name)

Exact Title HISTORICAL BACKGROUNDS AND PUPIL ACTIVITIES IN THE TEACHING OF INDUSTRIAL ARTS IN THE PUBLIC JUNIOR HIGH SCHOOLS OF NEW YORK CITY.

Degree granted Ed. D. ,Date 1959 ,No. of pages in report

Granted by New York University New York City, New York
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To provide a historical overview of Industrial Arts in junior high schools of New York City and to determine the current status of activities in these programs.

Source of Data and Method of Study:

Both primary and secondary sources were used to obtain data for the historical overview. A normative survey was conducted of (a) 306 junior high school industrial arts teachers currently employed in eighty-three New York City schools and (b) 100 junior high school industrial arts teachers outside New York City. Also a structured interview with teachers, supervisors and administrators of 112 industrial arts shop was conducted.

Findings and Conclusions:

The findings of the study support the conclusions that (a) industrial arts objectives lie in the framework of general education but are not in consensus with modern industrial technoloty practices (b) industrial arts programs are typlified by manipulative, non academic types of activity and (c) industrial arts facilities and equipment are generally inadequate for supporting a quality program. In general, considerably more work needs to be done in specifying the aims and objectives of industrial arts programs and to take financial steps to enrich the current industrial arts offering in junior high schools.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARAH COMMITTEE - AIAA - ACIATE - NAITTE

Author Paulin, Henry, Sylvester
(Last name) (First name) (Middle name)

Exact Title CERAMIC MANUFACTURING INDUSTRY: IMPLICATIONS FOR INDUSTRIAL ARTS CURRICULUM DEVELOPMENT

Degree granted Ph. D. Date 1964 No. of pages in report 245

Granted by Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An analysis of the ceramic manufacturing industry to determine the practically for industrial arts curriculum development.

Source of Data and Method of Study:

A master list was prepared of formulations concerning the structural elements of all industry (preliminary study of the ceramic industry). A second background study concerning the history of ceramics from its prehistoric orgins to the present was completed. A questionnaire study of the ceramic industry, submitted to the ceramic industries of New York State, was conducted and forty-four responded.

Findings and Conclusions:

The plan of this dissertation is unique in the literature of Industrial Arts Education because the usual policy is to report the operational details as indicated, it is at once apparent that a far more penetrating plan must be employed to teach the industry as such and then to use these findings as curriculum resource materials. Such is the clearly unique nature of the approach used by this study for the ceramic industry and which in turn should be employed by studies of the other industries in the manufacturing division of the technology.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Pawelek, Alan, R.
(Last name) (First name) (Middle name)

Exact Title AIR AGE EDUCATION.

Degree granted Ph.D., Date 1950, No. of pages in report 383

Granted by University of Minnesota Minneapolis, Minnesota
(Name of institution) (City, State)

Where Available: Microfilm ( ) Micorfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the nations's offerings and activities in Air-Age instruction of general education import, with particular reference to the preparation and upgrading of teachers.

Source of Data and Method of Study:

Data were obtained from letters sent to selected agencies and individuals, review of literature, experimental college class of 12 weeks duration, planned, taught and evaluated, and an inquiry from sent to "jury of specialists."

Findings and Conclusions:

Educators at all levels are interested in aviation education. The government, industries, and state departments of education are active in publishing Air-Age education materials. State and federal agencies are beginning to assume leadership in making major educational changes. Success in an aviation course is not significantly correlated with achievement on psychological and reading examinations. Aviation education can best be presented to teachers through workshops.

SOURCE SHEET FOR SUMMARIES OF SUTDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Pawelek, (Last name), Stanley (First name), J. (Middle name)

Exact Title AN ANALYSIS AND EVALUATION OF CERTAIN FUNCTIONAL TRAINING CHARACTERISTICS OF TEACHER PREPARATION IN INDUSTRIAL ARTS.

Degree granted Ed.D., Date 1941, No. of pages in report 152

Granted by Pennsylvania State College (Name of institution) State College, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A survey conducted through 100 institutions which prepare industrial arts teachers. Thirty organizational aspects of teacher preparation were studied according to current practice, judgments of best practice, and principles arrived at experimentally.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Payne (Last name), Am (First name), Vincent (Middle name)

Exact Title A PROPOSED PROGRAM FOR THE DEVELOPMENT AND USE OF INSTRUCTIONAL MEDIA IN INDUSTRAIL TEACHER EDUCATION AT TUSKEGEE

Degree granted Ph. D. Date 1965 No. of pages in report 273

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the status of development and utilization of instructional media in industrial teacher education at selected colleges and universities in the United States; and to derive criteria for the establishment of a program for the development and use of the media in industrial teacher education at Tuskegee Institute.

Source of Data and Method of Study:

Data were obtained through opinionnaire, a questionnaire, interviews, and observations. An opinionnaire was designed and submitted to a jury of twenty-five leader in industrial education at selected colleges and universities for their reactions to the stated criteria. Personal visits were made to five selected midwestern universities for interviews.

Findings and Conclusions:

1. It was revealed that at the majority of the institutions, the responsibility for selecting and making audio-visual materials, such as models, mock-ups, and educational bulletin boards, is borne by the individual instructors who use them.
2. Forty-five percent of the respondents to the questionnaires indicated that individual instructors who use these materials also prepare them.
3. With regard to the use of projected materials in industrial teacher education, it was found that 16 mm motion pictures are used more than any other media.
4. The data revealed that the medium with the least amount of usage is the video-tape recording.
5. Criteria were determined for the development and use of instructional media in industrial teacher education at Tuskegee Institute, but a detailed program was not prescribed. However, such a program can be developed from the recommendations dealing with this aspect of the study.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Pedersen (Last name), George (First name), Leslie (Middle name)

Exact Title Employee Training in the Metalworking Industries of the Illinois-Iowa Quad-City Area.

Degree Granted Ed. D. Date 1957 No. pages in report 164

Granted By (Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the extent and details of apprenticeship, cooperative, supervisory, technical, and tuition-aid programs in 20 of the largest Quad-City metalworking industries. These results are compared with a survey of similar types of training in three of the largest automotive companies in Detroit.

Source of Data: The personal interview-questionnaire method during visits to all plants and companies included in the study.

Findings and Conclusions: Fifteen plants have apprentices in training; the five other plants have conducted programs, but at the time had no apprentices in training. College cooperative programs are sponsored in seven plants in the Quad-Cities and by all of the Detroit companies. Supervisory training was found to be slighted by many of the smaller industries in the Quad-Cities. All larger industries in the Quad-Cities and all companies in the Detroit area have well developed supervisory training programs. Technical training, as a distinct type, was found to exist in only one Quad-City industry. Tuition-aid programs are gaining popularity among industries in the Quad-Cities.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Peiffer, Herbert, Claire, Jr.
(Last name) (First name) (Middle name)

Exact Title VOCATIONAL EDUCATION IN CALIFORNIA UNDER THE FIRST COMMISSIONER OF INDUSTRIAL AND VOCATIONAL EDUCATION.

Degree granted Ed. D., Date 1939, No. of pages in report 317

Granted by Stanford University Stanford, California
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A review of the development of vocational education in California from 1900 to 1925. Significant trends are stressed.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Peithman, (Last name), Roscoe (First name), Edward (Middle name)

Exact Title THE PREPARATION OF TEACHERS OF INDUSTRIAL ARTS IN THE AREA OF ELECTRICITY AND ELECTRONICS.

Degree granted Ed.D., Date 1955, No. of pages in report 155

Granted by Oregon State College (Name of institution) Corvallis, Oregon (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the preparation needed for teaching electricity and electronics in the industrial-arts program of the secondary school.

Source of Data and Method of Study:

Data were obtained by questionnaires sent to secondary school and college teachers of electricity and electronics.

Findings and Conclusions:

Preparation in both electricity and electronics should be required of all students who plan to teach industrial arts in the secondary school. Three semester hours of general electricity followed by three semester hours of general electronics are recommended for teaching in the electrical area of the comprehensive general shop, and eighteen semester hours in electricity and electronics are recommended for those students preparing to teach in the limited general shop and/or the unit shop. Recommendations are made covering: courses which should be included in a program for preparing teachers in the electrical areas; the content of the courses in electricity and electronics; and the supporting fields of study in mathematics and physical science.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Pendered (Last name), Norman (First name), C. (Middle name)

Exact Title An Evaluative and Comparative Study of Industrial Arts Programs in Selected Junior High Schools of Pennsylvania At Various Levels of Financial Expenditure.

Degree Granted Ed. D. Date 1951 No. pages in report 167

Granted By The Pennsylvania State University (Name of Institution) University Park, Penn. (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To evaluate and to compare programs of industrial arts at several levels of financial expenditure in certain selected junior high schools of Pennsylvania.

Source of Data and Method of Study: A rating scale was developed and submitted twice to national committees for their validation. The scale was then used by 44 judges to rate 18 industrial arts programs and later re-used to evaluate the same programs and a correlation coefficient of 0.967 was found. The junior high school industrial arts programs were selected for study by the use of a questionnaire and an examination of records in the Department of Public Instruction. The application of the rating device was made by a personal visit to each of the selected programs.

Findings and Conclusions: While in some instances it appears that there is a definite positive correlation between the instructional period cost and the quality of the industrial arts program, certain other factors such as what is taught, how it is taught, and who does the teaching, clearly are more closely related and contribute more heavily to the quality of an industrial arts program as measured by the descriptive rating scale.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Penny, Forest, Lee
(Last name) (First name) (Middle name)

Exact Title Origin and Development of Industrial Education in Kansas.

Degree Granted Ed. D. Date 1960 No. pages in report 302

Granted By University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To bring together and present in a systematic form the essential facts concerning the origin and development of industrial education in the State of Kansas, and thus assist in clarifying the thinking of teachers, supervisors, school administrators, and laymen as to the nature and purpose of the various industrial education programs.

Source of Data and Method of Research: Data were secured through historical research, interview, letter, and questionnaire techniques.

Findings and Conclusions: The oldest form of industrial education in Kansas was a trade program for Indians at the Shawnee Manual Labor School opened in 1838. Apprenticeship training was organized by Territorial Law in 1855. In 1942 the State Apprenticeship Council was organized. Schools for teaching trades were organized for the blind in 1859, for the sighted in 1873, and for the deaf in 1887. Reimbursable trade programs were begun in 1917.

Part-time cooperative education needs to be expanded. Related trade extension programs need to be improved. After World War I, 537 veterans took vocational rehabilitation training in Kansas, and following World War II 87,700 veterans were trained on four levels in the State. Industrial arts was begun in the secondary schools at Fort Scott in 1899. Currently there is a trend away from woodworking and toward other areas of instruction in industrial arts. Standards are lacking in industrial arts curricula.

Kansas State Teachers College, Pittsburg, was organized in 1903 to train industrial arts teachers. Kansas has 9 senior colleges and 14 public and denominational junior colleges offering industrial teacher education. Certification and development of satisfactory curricula for training teachers in industrial arts, trade subjects, and cooperative programs need to be studied.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Perdue (Last name), Saul (First name), Martin (Middle name)

Exact Title PROPOSED PROGRAM AND ORGANIZATION FOR BALTIMORE'S CARVER VOCATIONAL-TECHNICAL HIGH SCHOOL.

Degree granted Ed.D., Date 1954, No. of pages in report 205

Granted by Columbia University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To formulate a program and organization for the Carver Vocational-Technical High School of Baltimore, Maryland.

Source of data and method of study:

Data were secured through an analysis of the present program and organization, community needs, actual experiences in the present school, educational practices in literature, and practices observed in thirty schools visited.

Findings and Conclusions:

The major conclusions were to initiate a diversified occupations form of training for trades of low enrollments, initiate a technical curriculum that is geared to college preparatory requirements, offer a tenth grade program in general education, increase the number of trade offerings by ten, and to eliminate the two year vocational curriculum.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Pershern (Last name), Frank (First name), R. (Middle name)

Exact Title THE EFFECT OF INDUSTRIAL ARTS ACTIVITIES ON SCIENCE ACHIEVEMENT AND ATTITUDES IN THE UPPER ELEMENTARY GRADES.

Degree granted Ed. D., Date 1967, No. of pages in report

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the effectiveness of integrating industrial arts activities with the teaching of science in grades four through six.

Source of Data and Method of Study:

The experimental design consisted of using six classes of students; three classes were designated as experimental and three classes were designated as control. Effectiveness was measured in terms of scores on a teacher made achievement test of initial learning and an attitude questionnaire.

Findings and Conclusions:

An analysis of variance-covariance using pre-post test gain scores revealed that (a) the experimental groups for the fourth and fifth grades did significantly better than the control group respectively, but no such differences existed with the groups of sixth graders; and (b) teachers agreed to the concept of integrating industrial arts content with the content of science courses. The conclusion was made that, while significant differences between methods of instruction were not found, both the teachers and the students preferred the integrated industrial arts-science concept of instruction.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Peters, Donald, F.
(Last Name) (First Name (Middle Name)

Exact Title Supervision of Industrial Education: Scope of Present Practice, Teacher Reaction to the Practice, and the Apparent Effectiveness of the Practice.

Degree Granted Ed. D. Date 1959 No. pages in report 190

Granted By University of Maryland College Park, Maryland
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To determine the nature and scope of the practice of supervision in industrial education, as described by and reacted to by experienced teachers, and to evaluate the data submitted, using an instrument developed for this purpose.

Source of Data and Method of Study: An instrument developed for gathering data from industrial arts and vocational industrial education teachers. An evaluative criteria was developed and applied to the data received.

Findings and Conclusions: Industrial education teachers who participated in this study apparently do not associate with supervision the clarification of aims, purposes, and principles of education. There is little evidence of any awareness of the educational benefits inherent in deliberations on this level. Teachers request assistance in teaching methods and techniques apparently because techniques resolve immediate problems; they evaluate the effectiveness of the supervisor in terms of the regard supervisors show for the individual student or teacher.

Teachers on their own volition make a high percentage of their requests in the curriculum area. Teachers do not report the use of a variety of organized inservice activities used by supervisors. The dominance of favorable reactions toward supervisors and the initiative exercised by teachers in making contacts with their supervisors are complimentary of teacher-supervisor relationships. The questionable element is the extent to which supervisors and teachers dealt candidly with significant educational problems.

600

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Phallen (Last name), Charles (First name), Wellington (Middle name)

Exact Title THE TECHNICAL INSTITUTE MOVEMENT: A STUDY AND PROJECTION OF THESE PROGRAMS IN AMERICAN HIGHER EDUCATION

Degree granted Ph. D., Date 1958 No. of pages in report 198

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To examine the nature of the technical institute; to collect and correlate opinions, facts and philosophies reflecting the status of this type of program; to investigate the needs of American industry; and to outline the place, organization, and projection of this type of higher education.

Source of Data and Method of Study:

No source of data or method listed in the abstract.

Findings and Conclusions:

1. The continued shortage of technicians in industry warrants a greater expansion of technical education above the high-school level.
2. More facilities are needed for training technical institute teachers and administrators.
3. State boards of technical education should be established in each state.
4. The curriculums of technical institutes should be better balanced by including more general education.
5. There is a need to establish better relations with industry in many area of institute work.
6. Technical education needs to be made more available locally, because most cities of 50,000 population or more could support a technical school.
7. Industry should give financial aid to worthy students.
8. The coordination of institute programs is desirable.
9. A master plan is needed to supplement technically trained man-power sources.
10. The standing of Technical Institute programs must be built up to a status at least equal to that of any other higher education program.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Phillips, (Last name), Augustus (First name), C. (Middle name)

Exact Title INDUSTRIAL ARTS FOR NEGROES IN THE SOUTH ATLANTIC REGION.

Degree granted Ph.D., Date 1941, No. of pages in report 209

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpsoe of Study:

A study which investigates the population and occupational shifts among Negro workers in the South Atlantic regions in an effort to plan a program of industrial education for these Negroes in keeping with the changes in their economic and social life.

Source of Data and Method of Study:

This study is based largely on census data. A second source of data was The Urban Negro Worker in the United States. A review was made of some of the colleges in the South Atlantic region offering teacher education program in industrial education.

Findings and Conclusions:

The Negro population was shifting from rural to urban centers. The shift represented a change from agricultural occupations to industrial occupations. The shift suggests implications from both industrial arts and industrial-vocational education. The industrial arts teacher education programs show that the colleges base their program upon philosophical criteria set up by a local curriculum committee.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Phillips (Last name), Joseph (First name), Warren (Middle name)

Exact Title MECHANICAL DEVICES AS AIDS IN THE TEACHING OF AVIATION, DESCRIBED AND ILLUSTRATED.

Degree granted Ph. D., Date 1935, No. of pages in report 326

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A description of fifty-three devices in an effort to explain the various principles of applied science to aviation, navigation, and the airplane engine. These devices were used to prepare lecture and demonstration methods of teaching.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Phillips, Kenneth
(Last name) (First name) (Middle name)

Exact Title STUDENT WORKSHOPS IN LIBERAL ARTS COLLEGES.

Degree granted Ph. D., Date 1950, No. of pages in report 238

Granted by The Ohio State University Columbus, Ohio
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This study is concerned with a program which can be provided on liveral arts campuses as a free time activity or service area, to provide an opportunity for practical expression. It is felt that students workshop should be an effective method for increasing student comprehension of our technological environment.

Source of Data and Method of Study:

A master list of 800 American liberal arts colleges was compiled and cross checked for reliability and accurateness. A letter of presentation and questionnaire were divised and mailed to each of them. This letter determined the location of student workshop activity and indicated interest on a national scale.

Findings and Conclusions:

Of the 406 colleges reviewed, 52 per cent had the student workshop idea in action on their campuses. Four programs were then analyzed to illustrate how they had developed and conducted student workshops. These colleges were: Careleton College, University of New Hampshire, Texas State College for Women and Dartmouth College. Organization of a student workshop was developed and included in the thesis.

604

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Piersall (Last name), Arnold (First name), Cecil (Middle name)

Exact Title AN EXPERIMENT IN THE USE OF THREE DIFFERENT METHODS TO TEACH A TECHNICAL INFORMATION UNIT IN INDUSTRIAL ARTS WOODWORKING.

Degree granted Ed.D., Date 1964 No. of pages in report 219

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

1. To determine which of the three instructional methods would yield the most efficient learning based upon a pretest and a post-test.
2. To determine the effectiveness of the methods utilized when the students were divided into three groups (upper, inter, and lower quartiles) as determined by their pretest scores.
3. To determine which of the methods tested would yield the greatest amount of retention of the material studied four and seven weeks after the instruction occurred;
4. To make recommendations based upon the findings in items one through three, regarding methods of teaching a non-manipulative technical unit of factural information to a college freshman class.

Source of Data and Method of Study:

Three instructional methods were utilized in this study. Method "A", the traditional method, was a lecture-chalkboard presentation. Method "B" utilized a set of information sheets. There was no formal presentation of subject matter by the instructor. Method "C" was a lecture presentation supplemented by closed circuit television. Three methods were compared by applying the Kruskal-Wallis one-way analysis of variance by rank. Methods "B" and "C" were then compared individually to Method "A" by using the Mann-Whitney U Test.

Findings and Conclusions:

As far as the net learning was concerned, the three methods were equally effective. The advantage held by Method "A" for the interquartile groups and by Method "C" for the lower quartile groups on the four-week retention test disappeared by the time the seven-week retention test was given. In terms of retention over a period as long as a college quarter, there was no significant difference in the effectiveness of the three methods used in this study. Since the methods appeared to be equally effective, the one requiring the least amount of classroom time was considered to be the most efficient.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Pinckney, Charles, Whitner
(Last name) (First name) (Middle name)

Exact Title LIABILITIES OF SHOP TEACHERS AND SCHOOL DISTRICTS FOR PUPIL INJURIES IN SCHOOL SHOPS RESULTING IN COURT CASES IN THE UNITED STATES.

Degree granted Ed.D., Date 1953, No. of pages in report 80

Granted by The Pennsylvania State University University Park, Pa.
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate the legal liabilities of shop teachers and school districts for pupil injuries in school shops.

Source of data and method of study:

Data were obtained by the method of legal research.

Findings and Conclusions:

Only five states in the U. S. have statutory provisions that have been judicially interpreted to impose liability upon school districts to pay claims or judgments in lawsuits seeking recovery for pupil injuries in public schools. School districts were named defendants in twenty cases found in the study; shop teachers were named defendants in three cases. School districts and shop teachers were named co-defendants in eleven cases. In sixteen cases damages were awarded to plaintiff for his injuries. The extent of plaintiff's injury influenced the amount of damages recoverable, irrespective of equipment or activity that caused the injury. Alleged violation of safe place statutes appeared more frequently as grounds for action against school districts. Failure to properly inspect and repair equipment was second highest complaint. There has been no significant change in common law principles or interpretation that have affected the liability of either school districts or shop teachers from 1920 to 1952.

606

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Poleszak, Leonard, J.
(Last name) (First name) (Middle name)

Exact Title A STUDY OF STUDENT TEACHER'S EXPECTED AND ACTUAL OUTCOMES AND THE STUDENT TEACHING PROGRAM OF THE INDUSTRIAL ARTS EDUCATION DIVISION AT THE STATE UNIVERSITY OF NEW YORK, COLLEGE AT BUFFALO.

Degree granted ________, Date ________, No. of pages in report ____

Granted by Michigan State University East Lansing, Michigan
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine and analyze the expected and actual outcomes, held by a selected group of industrial arts education student teachers, in relation to the personnel with whom they come in contact during student teaching. A second purpose of this was to discover the relationship which existed between attitude scores, (as measured by the Minnesota Teacher Attitude Inventory), prior intent to teach, and student's verbalized outcomes.

Source of Data and Method of Study:

The population included one hundred and four (104) industrial arts education junior and/or senior students at the State University of New York, College at Buffalo, who were assigned to student teach during the second, third, and fourth quarters of the school year 1962-63. A pre-test questionnaire, and the MTAI, were administered on the day preceding the first day of student teaching. A post-test questionnaire, and the MTAI, were administered on the day after completion of student teaching.

Findings and Conclusions:

Approximately 65 percent of total expected and actual outcomes verbalized by the students in this study were related to the student teaching program objectives of, "become acquainted with the role of the school; knowledge of methods and materials of teaching; and assuming the responsibilities of a regular classroom teacher."
Approximately 11 percent of total expected and actual outcomes were related to the objectives of, "extend knowledge of the subject matter area; further develop a philosophy of education; and develop an experimental and creative attitude."
The number and nature of the expected and actual outcomes verbalized by the students in this study indicated that the supervising teacher was felt to be the most influential person with whom they came in contact.
Students with high positive MTAI scores held different expected and actual outcomes than students with low negative MTAI scores.
Slight differences existed in the nature and number of verbalized outcomes reported by students who intended to teach as compared with those of students who were undecided, or did not intend to teach.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Polk, Harold, J.
(Last name) (First name) (Middle name)

Exact Title CHARACTERISTICS OF DIRECTORS OF AREA VOCATIONAL-TECHNICAL SCHOOLS.

Degree granted Ed. D. Date 1969 No. of pages in report

Granted by University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to ascertain whether or not there are characteristics which are present to a greater degree in top-ranking directors as compared to those who are not so ranked.

Source of Data and Method of Study:

Rankings forms were mailed to 72 members of the staff of the vocational division of 24 state departments of education and personal background information forms were mailed to 728 local directors of area vocational-technical schools in the same 24 states.

Findings and Conclusions:

1. There is a high and positive relation between vocational education as graduate preparation and rated success as a local director of an area vocational-technical school.
2. There is a positive relation between undergraduate preparation at a private college or university and rated success as a local directro of an area vocational-technical school.
3. There is a positive relation between the number of years of administrative experience in vocational education and rated success as a local director of an area vocational-technical school.
4. There is a positive realtion between membership in five or more professional organizations and rated success as a local director.
5. There is no statistically significant relation between rated success as a local director of an area vocational-technical school and any of the other characteristics included in the study--age, undergraduate education, work experience, and teaching experience.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Porter (Last Name), Charles (First Name), Baddeley (Middle Name)

Exact Title An Experimental Investigation of Selected Variables Related to Morse Code Learning.

Degree Granted Ed. D. Date 1957 No. pages in report 85

Granted By University of Illinois (Name of Institution) Urbana, Illinois (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To develop a logical approach to the problem of increasing the effectiveness of teaching Morse Code reception. The psychological orientation adopted was based on a conception of Morse Code learning as being the acquisition of special psychophysical habits.

Source of Data: Data were obtained by measuring the relative effectiveness of two methods of teaching Morse Code. The two groups of nine students used in the experiment were matched on the basis of a pretest.

Findings and Conclusions: The evidence, though supported only in part by statistical tests, suggests that the experimental method used in the study may demonstrate some superiority over the conventional "paired-associates" method for training individuals to receive clear Morse Code text.

609

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Porter, (Last name), Harold (First name), William (Middle name)

Exact Title AN INVESTIGATION OF INSTRUCTIONAL MATERIAL NEEDS FOR MACHINE SHOP TRAINING.

Degree granted Ph.D., Date 1948, No. of pages in report 164

Granted by Purdue University (Name of institution) Lafayette, Indiana (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study making use of questionnaires and checklists for the purpose of developing a pattern for a suitable textbook which would insure psychological adequacy in terms of such factors as reading level, technical vocabulary, and proper use of illustrations.

Source of Data and Method of Study:

Information not available;

Findings and Conclusions:

Information not available.

610

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Porter, Sam, R.
(Last name) (First name) (Middle name)

Exact Title AN APPRAISAL OF THE FORD MOTOR COMPANY'S INDUSTRIAL ARTS AWARDS COMPETITION, 1951 THROUGH 1960.

Degree granted Ed. D., Date 1962, No. of pages in report 255

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to evaluate the results and effectiveness of the Industrial Arts Awards Competition sponsored by the Ford Motor Company.

Source of Data and Method of Study:

Data were secured from the records of the Ford Motor Company and from information forms obtained from 340 award winners, 293 parents of award winners, 547 industrial education instructors, and 522 secondary school principals.

Findings and Conclusions:

1. Approximately 4,000 entries were submitted each year; one-third won awards.
2. Only 2.6 percent of the winning schools produced 20 percent of the awards.
3. Winners came from schools with a mean enrollment of 1,892. These schools offered over five different subject-areas in industrial education.
4. The largest percentage of instructors favored a combination of local, state, and national contests.
5. Although well-publicized for fifteen years, the competition reached only 15 percent of the nation's secondary schools.
6. There was little evidence that the competition distorted the industrial education program or its learning experiences for participants or nonparticipants.
7. Successful participation in the contest seems to help the morale of instructors and gives the program status, improved standards of performance, and favorable public relations.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Poucher (Last name), Kenneth (First name), E. (Middle name)

Exact Title AN EXPLORATORY STUDY: ACHIEVEMENT IN POWER MECHANICS AS RELATED TO GROUPING OF STUDENTS AND OTHER FACTORS.

Degree granted Ph. D. Date 1968 No. of pages in report 164

Granted by Purdue University (Name of institution) Lafayette, Indiana (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To explore the educational value of a technique of grouping students for laboratory activity in a power mechanics course. The secondary purposes were to explore the relationship between performance on a Power Mechanics Achievement Test.

Source of Data and Method of Study:

The sample (N equals 140) consisted of students who completed the midterm examinati in seven classes of Industrial Education 140, Introduction to Power and Transportation, at Ball State University, Muncie, Indiana, during the 1966-67 academic year. Fisher's test and correlation techniques were used to test the null hypothesis.

Findings and Conclusions:

The findings indicated that neither adjacents nor the non-adjacents group demonstrated a superiority over the other in pre-test --post test mean difference scores on the Power Mechanics Achievement Test.

Significant findings at the .01 level were:
1. SAT verbal scores and post-test scores ($r = .45$), and
2. SAT mathematics scores and post-test scores ($r - .39$).

Significant findings at the .05 level were coefficeints of correlation between pre-test -- post-test difference scores.

There was little educational advantage of grouping students into adjacent and non-adjacent work pairs on the basis of pre-test scores for laboratory activity.

The SAT scores might have some useful value for predictive purposes in power mechanics. Having obtained our coefficeints of correlation significant at the .05 level would indicate further study in warranted in regard to those variables and their relationship to achievement in power mechanics.

Further, continued effort should be expanded to explore variables such as motivatio anxiety, interest, effort and other elusive variables and their relationship to performance in laboratory activities.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Powell, Paul, Eldon
(Last name) (First name) (Middle name)

Exact Title Administration of Departments of Industrial Teacher Education: Budget and Accounting Systems.

Degree Granted Ed. D. Date 1954 No. pages in report 308

Granted By Wayne State University Detroit, Michigan
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To survey budget and accounting systems used by 202 departments of industrial teacher education, to determine criteria for good budget and accounting practice, and to recommend budget and accounting forms and methods suitable for such departments.

Source of Data and Method of Research: A survey was conducted by sending questionnaires to departmental chairmen on what they considered to be good budget and accounting practices. A checklist was also sent to those who evidenced a desire to participate, to determine criteria that would serve as a device for judging the effectiveness of present systems and formulating new ones.

Findings and Conclusions: The survey of budget practices of departments of industrial teacher education showed that each department maintained a budget system established by the administration of the institution and that the budget system closely followed the requirements of the State accounting agency. The study proved that departmental chairmen had given very little thought to budget and accounting problems. Budget preparation was done by chairmen in an authoritarian manner with little consideration for having faculty and students involved in such activities.

Departmental budgets were prepared with little thought for the total development of the college or university. The major problems of the departmental chairman in budget preparation were: estimating enrollment, lack of funds, and the attitude of the administrators of the institution toward departmental budgets. Items that chairmen believed should be considered in budget formulation were identified.

Accounting systems in use were developed by departmental chairmen according to their experience and training. Institutional policies and regulations concerning departmental accounting were almost nonexistent.

Seventeen criteria were determined and reported to assist in departmental budget preparation and accounting.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Power, Andrew, T.
(Last name) (First name) (Middle name)

Exact Title A SUGGESTED GUIDE FOR USE OF THE RELATED ARTS IN AN INTEGRATED CURRICULUM AT THE ELEMENTARY LEVEL IN BLOOMFIELD, NEW JERSEY, PUBLIC SCHOOLS.

Degree granted Ed. D., Date 1955, No. of pages in report 480

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a guide for integration of the related arts with the general elementary school classroom program, to enrich that program, and to promote child development.

Source of data and method of study:

Data were obtained from study guides and courses of study, publications on education and child growth, questionnaires, interviews and school visitations. The normative survey method of research was used.

Findings and Conclusions:

Authorities agree that the arts can be used to enrich the general elementary school program and to promote child growth. The arts can be integrated with the elementary school program within the present structure of elementary school classrooms. In-service training can be successfully used to help classroom teachers become more proficient in the use of the arts in the classroom.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE & AIAA - NAITTE

Author Powers, G., Pat
(Last name) (First name) (Middle name)

Exact Title Relationship of Scholastic Attainment to Rated Success of Experienced Industrial Arts Teachers.

Degree Granted Ed. D. Date 1961 No. pages in report 106

Granted By University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the relationship between marks earned in undergraduate industrial arts teacher education programs and subsequent success as an industrial arts teacher with 10 years or more teaching experience.

Source of Data and Method of Research: Data on scholastic attainment were obtained from official records of 43 colleges in 25 States for 200 industrial arts teachers who were teaching in 16 States. Ratings on teaching success were obtained from qualified industrial arts supervisors. Correlation techniques were used in handling the data.

Findings and Conclusions: A substantial positive correlation was found to exist between rated success of experienced industrial arts teachers and college marks earned in the following areas: professional courses in education (.51); academic courses (.52); all undergraduate courses (.51). A low, but positive correlation (.32) was found between rated teaching success and marks earned in technical courses in industrial arts

High Scholastic marks taken alone provide little guarantee of success as a teacher. Other factors, in addition to scholastic attainment, operate to produce successful industrial arts teachers.

615

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Pratzner, Frank, Charles
(Last name) (First name) (Middle name)

Exact Title TESTING AN EMPIRICAL PROCEDURE FOR INDENTIFYING TECHNICAL ASSOCIATIVE CONCEPTUAL STRUCTURE: DISCRIMINATING BETWEEN WORKMEN WITHIN AND BETWEEN TWO OCCUPATIONS.

Degree granted Ph. D. Date 1969 No. of pages in report

Granted by University of Minnesota Minneapolis, Minnesota
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The study was an exploratory study of an empirical procedure to identify the associative conceptual structures for two groups of radio communications equipment repairmen who were rated as performing identical on-the-job tasks at different levels of proficiency.

Source of Data and Method of Study:

A random sample of common and specific technical electronic word-concepts was selected and randomly arranged to elicit continuous free association responses from a small sample of "flexible" and "inflexible" radio communications repairmen. Each pair of flexible and inflexible workers responded freely to identical test instruments with as many technical words as possible in one minute.

Findings and Conclusions:

1. Associative meanings for one-fourth of the stimulus word-concepts were significantly different for the two groups of communications repairmen.
2. Flexible communications repairmen had a greater extent of meaning and agreement (gave significantly more responses) in associative meanings than inflexible workers.
3. Flexible workers had a significantly larger technical vocabulary in significantly different ways.
4. The associative conceptual structure of flexible workers was a larger, more balanced and better interrelated network of clusters (factors) than the structure of inflexible workers.
5. Flexible radio communications and flexible radio and television workers were significantly different in their associative meaning for twenty-seven percent of the common technical stimulus words sampled, and flexible communications repairmen had a greater extent of meaning for the common vocabulary.
6. Flexible communications workers had a larger common technical vocabulary, used in significantly different ways, than the flexible television workers.
7. The two groups of flexible workers had significantly similar associative meanings for thirty-one percent of the common technical vocabulary.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Preitz (Last name), Clarence (First name), H. (Middle name)

Exact Title ..GOALS AND BASIC UNITS OF INSTRUCTION FOR TREATMENT MEDIA COURSES FOR THE PREPARATION OF OCCUPATIONAL THERAPISTS.

Degree granted Ed. D., Date 1969, No. of pages in report ___

Granted by Wayne State University (Name of Institution) Detroit, Michigan (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain and establish the essential major goals for university level treatment media courses for the professional preparation of occupational therapists and to determine basic units of instruction that may be employed in organizing and structuring courses of study to fulfill the established goals.

Source of Data and Method of Study:

Systematic observation, supplemented by the interview, were the methods selected for collecting data. These methods, as well as data collecting instruments, were pretested in the pilot study. Eight cities, in eight geographic areas, of the nation were visisted. A six-member Panel of Consultants was formed to review the initial goals and basic units of instruction that had been interpreted from the findings of the research, and to determine if they were realistic and attainable for occupational therapy students.

Findings and Conclusions:

The Panel agreed:
1. That occupational therapy students should develop a use level of skill from learning experiences in treatment media courses.
2. That the project was the most appropriate vehicle which could be used to teach the student the identified skills.
3. That the revised basic units of instruction could be taught in less than the minimal time suggested by the accrediting body.

611

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Price, (Last name), Dennis (First name), Henry (Middle name)

Exact Title AN ANALYSIS OF CURRENT PRACTICES IN THE EVENING TRADE EXTENSION CLASSES IN THE LARGEST TEN CITIES IN EACH OF FIVE MIDWESTERN STATES.

Degree granted Ed.D., Date 1955, No. of pages in report 219

Granted by Indiana University (Name of institution) Bloomington, Indiana (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain current practices existing in the evening trade extension program.

Source of Data and Method of Study:

Data were secured through an interview schedule from ten cities in Illinois, Indiana, Kentucky, Michigan, and Ohio.

Findings and Conclusions:

Considerable variations in duties and responsibilities of adminstrators and supervisors were noted. The most used promotional device was feature news items in local newspapers. Certification of instructors was a state responsibility and little variation appeared. Their selection and training was a responsibility of local supervisors. Instructors were selected primarlly for experience in the trades to be taught rather than academic preparation. Educational background of instructors selected from the day-trade group were more extensive than journeymen instructors. Limited use was made of general advisory and craft committees. The lecture was found to be most useful for the related technical classes. Whereas, individual instruction was most used in shop and laboratory classes.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Pritchard (Last name), Miriam (First name), C. (Middle name)

Exact Title THE MECHANICAL ABILITY OF SUBNORMAL BOYS.

Degree granted Ph.D., Date 1937, No. of pages in report 73

Granted by Columbia University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

An experimental study which attempts to point up some factors, apart from intelligence, which might be contributing forces in the trade training performance of subnormal boys. Adolescents in one institution and of one ethnic group, namely, Jewish, are discussed.

Source of Data and Method of Study:

Findings and Conclusions:

10

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Proctor (Last name), Bernard (First name), Shaw (Middle name)

Exact Title ACCREDITATION IN INDUSTRIAL ARTS EDUCATION: A STUDY TO DEVELOP THE PURPOSES CRITERIA, POLICIES, AND PROCEDURES FOR THE ACCREDITATION OF INDUSTRIAL ARTS TEACHER EDUCATION PROGRAMS FOR THE BACCALAUREATE.

Degree granted Ph. D. Date 1950 No. of pages in report 335

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The development of the purposes, criteria, policies, and procedures for the accreditation of industrial arts teachers education programs, and the application and subsequent revision of the criteria and procedures.

Source of Data and Method of Study:

Use of bibliographical techniques to survey accrediting associations. An analysis and interpretation of the accrediting materials were used to develop a preliminary outline. Purposes, criteria, policies and procedures were developed by using the bibliographical and interview techniques.

Findings and Conclusions:

Through an examination of accepted purposes of accrediting agencies, existing research studies and interviews the writer concluded that the purposes developed will serve to guide the nature of accreditation activities in industrial arts teacher education. Criteria have been developed to evaluate the effectiveness of an industrial arts teacher education program in terms of its purposes. Policies have been developed for use in the evaluation and accreditation of industrial arts teacher education programs.

620 – 699 missing

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Pruski, John,
(Last name) (First name) (Middle name)

Exact Title Vocational Counseling Program for Secondary, Vocational and Other Schools.

Degree Granted Ph. D. Date 1958 No. pages in report 188

Granted By The Ohio State University Columbus, Ohio
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To analyze and evaluate the vocational counseling case of 300 veterans of the Korean campaign who received vocational counseling from the U. S. Veterans Administration and to project and propose a similar program of vocational counseling for adoption by the public secondary schools.

Source of Data and Method of Research: Files of the U. S. Veterans Administration Counseling Unit in Columbus, Ohio. This data was then tallied.

Findings and Conclusions: The individual Survey Data Form may be used in the secondary and other schools. Information not on this survey could be obtained in the school. Test measures for secondary and other schools do not appear to be radically different from those at V. A. counseling.

7d

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Prust, Zenas, A.
(Last name) (First name) (Middle name)

Exact Title CHANGES IN STUDENT ATTITUDES TOWARD SAFETY EDUCATION IN THE GRAPHIC ARTS LABORATORY.

Degree granted Ed. D., Date 1964, No. of pages in report 75

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To investigate various methods of presenting a graphic arts laboratory safety protection unit so as to develop favorable attitudes by the students toward chemical protection. The study was to determine which of the three teaching methods would produce the most favorable safety attitudes based on the scores of a pre-test, a post-test and a retention test.

Source of Data and Method of Study:

A safety unit in offset-lithography (film developing) was used for this study.

The Attitude Development for Chemical Safety scale was administered to each subject at the beginning of the unit. The ADCS scales were again administered to all groups after periods of three and eight weeks.

Findings and Conclusions:

The data did not support statistically a significant mean gain in the favorableness of attitude toward wearing protective material 100 percent of the time in the graphic arts chemical area.

The forced situatiin created a negative attitude toward safety in the graphic arts chemical area.

702

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Pufahl, Virgil, Russell

Exact Title RELATIVE EDUCATIONAL EFFECTIVENESS OF PRINTED INSTRUCTIONAL MATERIAL CONTAINING CHROMATIC AND ACHROMATIC GRAPHIC ILLUSTRATIONS.

Degree granted Ed. D., Date 1969, No. of pages in report ____

Granted by Arizona State University (Name of Institution) Tempe, Arizona (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To compare the relative educational effectiveness of three types of printed instructional material. It attempted to ascertain which type of material facilitated the development of insights and understandings and required the minimal amount of time for subjects of varying ages and mental abilities. This study also attempted to ascertain the effects and uses of color in illustrations which appeared in printed instructional material.

Source of Data and Method of Study:

The sample for this research was composed of 120 randomly selected industrial arts students, grades nine through twelve, enrolled in Platteville Senior High School, Platteville, Wisconsin. The experimental treatment procedure required subjects to review printed instructional booklets of approximately 1,500 words in length. One group reviewed a booklet that contained only text material. The second and third groups reviewed booklets which contained the same text material but were illustrated with four achromatic and chromatic visuals respectively.

Findings and Conclusions:

The ninth grade required the least time and scored the lowest. The tenth grade students scored the highest and required the most time. The grand mean for treatments revealed the non-visual treatment group required the shortest period of time but scored the lowest, while the chromatic visual group scored the highest and required the most time. As the mental ability indexes of subjects were examined and compared with their respective time and score criterion measures, it was apparent that higher mental ability students performed at a higher level of efficiency than did less capable students. Examination of the mean scores between the achromatic and chromatic groups showed the black and white visual more beneficial for the higher mental ability students and the colored illustrations more beneficial for the low mental ability subjects.

703

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Quick, Otho, James
(Last name) (First name) (Middle name)

Exact Title TEACHING AND NON-TEACHING BACCALAUREATE DEGREE GRADUATES WITH INDUSTRIAL ARTS MAJORS.

Degree granted Ph.D., Date 1954, No. of pages in report 249

Granted by University of Minnesota Minneapolis, Minnesota
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain whether any differences existed on thirteen items between the teaching and non-teaching baccalarueate graduates of Eastern Illinois State College with industrial arts majors.

Source of data and method of study:

Data were gathered from the records and mailed survey instruments for 258 graduates of Eastern Illinois State College.

Findings and Conclusions:

No significant differences between the teaching and non-teaching groups existed on the canvass of thirteen items from the records. Significant differences were found on a number of items gathered from survey materials. Those believed to be pertinent were: singing or playing a musical instrument as a recreational activity, participation in social welfare groups, participation in service organizations, yearly salaries or incomes, leaving last industrial teaching position because of inadequate salary, and reactions on fifty-five opinion statements. Opinion statements seemed to offer promise of being a best predictor on future classification into teaching and non-teaching groups.

1704

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Quier (Last name), George (First name), Taber (Middle name)

Exact Title A STUDY TO DETERMINE THE EXTENT TO WHICH CURRENT WOOD TECHNOLOGY INSTRUCTION IS CONTEMPORARY IN CONTENT AND EMPHASIS.

Degree granted Ed. D. Date May 31, 1969 No. of pages in report 100

Granted by University of Arkansas (Name of Institution) Fayetteville, Arkansas (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was twofold: (1) to determine if there was a significant difference between the coverage given certain specified topics of study within the field of wood technology, and the degree of importance afforded these topics by a panel of experts in forestry and the wood products industries; and (2) to provide annotated bibliographical information for those areas in which the difference was significant at the .05 level.

Source of Data and Method of Study:

Data were secured from the 87% return of the 100 questionnaires mailed to the sample of teacher educators and from the 100% return from the panel of experts.

Findings and Conclusions:

Data from the two groups were compared for significance of difference by using a t-test. As a result of this analysis the null hypothesis was rejected. The null hypothesis was: there is no significant difference between the coverage of selected topics of study in the teaching of wood technology by teacher educators and the degree of importance afforded these topics by a panel of experts in forestry, and in wood products production, sales, and utilization. Further analysis disclosed that although nearly half of the schools were adequate in forty percent of the areas less than one fifth adequately covered seventy percent or more of the topics.

705

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Randel, Stephen, V.
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF DRAFTING PRACTICES IN INDUSTRY WITH DRAFTING AS TAUGHT IN ENGINEERING SCHOOLS.

Degree granted Ed.D., Date 1957, No. of pages in report ____

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To compare drafting as taught in engineering colleges with the drafting practices followed in selected machinery manufacturing industries.

Source of Data and Method of Study:

Forms containing questions on lettering, use of instruments, dimensioning, thread representation, graphs, charts, and drawing procedures were sent to drafting instructors in engineering schools and chief draftsmen in machinery manufacturing industries throughout the nation.

Findings and Conclusions:

1. There are various discrepancies in drafting practices in industry and engineering schools.
2. Freehand lettering is almost exclusively used.
3. A great variety of lettering is used.
4. More lettering machinery is used in industry than in school.
5. Engineering students make more pictorial drawings than industrial draftsmen.
6. Differences in dimensioning are moderate.
7. A greater variety of graphs, charts and diagrams are used in industry.
8. More experience in industrial procedures is needed.
9. Engineering education places greater emphasis on fundamentals, problem solving, and freehand drawing, and less emphasis on manipulative skills.

9060

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Ray, J., Edgar
(Last name) (First name) (Middle name)

Exact Title THE GRAPHIC METHOD OF TEACHING ARCHITECTURAL DRAFTING IN THE SENIOR HIGH SCHOOL, VOCATIONAL AND ADULT SCHOOLS, AND TEACHER-TRAINING INSTITUTIONS.

Degree granted Doctor's, Date 1944, No. of pages in report ____

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

701

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ray, Rex, E.
(Last name) (First name) (Middle name)

Exact Title THE INSTRUCTIONAL FUNCTIONS OF ENGINEERING TECHNOLOGY INSTRUCTORS IN IN MICHIGAN COMMUNITY JUNIOR COLLEGES AS DETERMINED THROUGH AN ANALYSIS OF CRITICAL INCIDENTS.

Degree granted Ed.D., Date 1966, No. of pages in report ____

Granted by: Michigan State University East Lansing, Michigan
(Name of Institution) (City, State)

Where Available: Microfilm ( ) MIcrofiche ( ) E.R.I.C. ( )

Purppse of Study:

To identify and classify instructional behaviors of engineering technology instructors engaged in classroom and laboratory teaching.

Source of Data and Method of Study:

The population included in this study was taken from the total population of Michigan community college instructors teaching in the areas of mechanical-industrial, drafting-design, and electricity-electronics technology. The critical incident technique was selected and a general statement of purpose describing the function of an engineering technology instructor was developed.

Findings and Conclusions:

1. Primary emphasis was placed uponinstructional activities associated with the presentation of instruction.
2. The instructors utilized the formal lecture, instructional aids, application and assignment, and class discussion as the most frequently used methods of instruction.
3. Daily planning and preparation for instruction was a major activity in which the instructors were involved.
4. The analyses identified some relationships between the frequency with which behaviors were reported and certain characteristics of the instructors.
5. The instructors were more effective than ineffective in activities associated with instructional management for learning, student-teacher interactions within the classroom and laboratory, and counseling.
6. They were less effective in activities associated with planning and preparation for instruction.
7. The analyses identified some relationships between effectiveness of instructional behavior and certain characteristics of the instructors.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Ray (Last name), Willis (First name), Eugene (Middle name)

Exact Title An Experimental Comparison of Direct and Detailed and Directed Discovery Methods of Teaching Micrometer Principles and Skills.

Degree Granted Ed. D. Date 1957 No. pages in report 181

Granted By University of Illinois (Name of Institution) Urbana, Illinois (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the relative effectiveness of directed discovery instruction in situations providing numerous problem-solving opportunities, upon initial learning, retention, and transfer of micrometer principles and skills as compared with direct and detailed instruction in these situations, with three levels of intelligence.

Source of Data and Method of Research: Treatments by levels of experimental design were employed. Two experimental teaching methods and one control constituted the treatments, and subjects of three levels of mental ability--117 ninth-grade boys from three junior high schools--served as subjects. The effectiveness of instruction was determined by criterion tests administered immediately following treatment, one week after treatment, and six weeks after treatment. The analysis of variance techniques, correlational techniques, and others were used in relation to their adequacy to the data.

Findings and Conclusions: (1) The direct and detailed and the directed discovery methods of teaching are equally effective with regard to initial learning of micrometer principles and skills.

(2) The direct and detailed and directed discovery methods of teaching are equally effective with reference to retention of material initially learned as measured one week after instruction.

(3) The directed discovery approach to teaching is superior to direct and detailed instruction with respect to retention of material initially learned, as determined six weeks after instruction.

(4) The directed discovery method of teaching is more effective than the direct and detailed approach in enabling students to make wide applications of material learned to new and related situations, both at one and six weeks after instruction.

(5) There is no interaction of teaching method and intellectual level.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Reed (Last name), Howard (First name), Odin (Middle name)

Exact Title EVALUATION OF INDUSTRIAL ARTS IN SECONDARY SCHOOLS OF ILLINOIS

Degree granted Ed.D., Date 1948, No. of pages in report 256

Granted by University of Illinois (Name of institution) Urbana, Illinois (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A survey of the methods and devices used and the facilities for effective shop and drawing instruction in fifty schools in Illinois.

Source of Data and Method of Study:

Findings and Conclusions:

710

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Reed (Last name), William (First name), T. (Middle name)

Exact Title A PARTIAL SELECTION OF CURRICULUM CONTENT FOR THE IMPROVEMENT OF INDUSTRIAL TEACHER EDUCATION IN COLLEGES FOR NEGROES.

Degree granted Ed. D., Date 1947, No. of pages in report 206

Granted by University of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Many of the essentials necessary for optimum adjustment to and in occupational pursuits are not presented in textbooks and other instructional materials. Through a study of these shortages, the author presents an evaluated list of descriptive needs suitable for strengthening preparation in various areas of industrial pursuits.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Reese (Last name), Robert (First name), Max (Middle name)

Exact Title AN EVALUATION OF THE OHIO TEACHER EDUCATION PROGRAM FOR TRADE AND INDUSTRIAL EDUCATION TEACHERS.

Degree granted Ph. D., Date 1954, No. of pages in report 153

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the nature of the problems encountered by beginning trade teachers, the frequency with which the problems occur, and the effectiveness of Ohio's program of trade and industrial teacher education in solving these problems.

Source of data and method of study:

Data were obtained by a check list submitted to two hundred forty Ohio vocational-industrial education teachers, which was then developed into an evaluative check list validated by forty-two specialists and checked by two hundred seventy-five teachers.

Findings and Conclusions:

A list of problems of beginning vocational-industrial teachers was developed. These teachers tended to agree on major problems. Teachers do not recognize as potential problems their own personal characteristics. The vocational-industrial teacher training program provides help to most beginning teachers on their teaching problems. An in-service training program composed of short units appears to be more feasible and practical than a program of organized courses which operate for a full school period.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Relyea (Last name), Gladys (First name), Mildred (Middle name)

Exact Title THE CLINICAL LABORATORY TECHNICIAN: AN OCCUPATIONAL ANALYSIS.

Degree granted Ed.D., Date 1937, No. of pages in report 166

Granted by Stanford University (Name of institution) Stanford, California (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An analysis of the occupation of laboratory technician to provide information for those considering entrance in the occupation. It aims to aid in counseling and guidance work also.

Source of data and method of study:

Findings and Conclusions:

713

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Remick, Edward, Louis
(Last name) (First name) (Middle name)

Exact Title A STUDY OF AN EXPERIMENTAL PROGRAM OF INTEGRATED INDUSTRIAL ARTS-SCIENCE IN THE JUNIOR HIGH SCHOOL.

Degree granted ______, Date ______, No. of pages in report ______

Granted by Michigan State University East Lansing, Michigan
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The main problem of this study was to investigate a curricular program which would aid pupils in the integration of theories, concepts, and principles of science and industry.

Source of Data and Method of Study:

The experimental design involved the selection of a sample (70) from the total population (428) of eighth grade students enrolled at C. W. Otto Junior High School in Lansing, Michigan, during the 1962-63 school year. This sample was randomly assigned to experimental and control groups of equal size. The control group was taught by the traditional science teaching method where the instructor prepared and gave lectures and demonstrations. The experimental group was involved in a teaching-learning situation where science and industrial arts objectives were integrated. Facilities used by the experimental group included the physical science and industrial arts laboratories. The control group used a regular science classroom. Comparisons of academic achievement and ability to apply theory in practical situations were made at the conclusion of the program.

Findings and Conclusions:

From the results of this study, it was concluded that the achievement of students in the integrated program was significantly greater than that of similar students enrolled in the regular program. The integrated industrial arts-science method allowed for flexibility of instruction, involved considerable individual research, and incorporated manipulative activities on the part of individual students. Much of the responsibility for leaning in the integrated program was placed on and accepted by the students. This involvement was a factor which accounted for high individual achievement of pupils in the experimental group.

714

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ressler, Ralph,
(Last name) (First name) (Middle name)

Exact Title RECRUITMENT OF INDUSTRIAL ARTS TEACHERS IN THE STATE OF OHIO

Degree granted Ph. D., Date 1966, No. of pages in report 228

Granted by The Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The need of more industrial arts teachers in the state of Ohio led to this study of the effectiveness of the industrial arts teachers and other such persons in the recruitment of students for industrial arts teacher preparation.

Source of Data and Method of Study:

Data was collected through the use of survey forms from three separate populations: industrial arts majors in teacher preparation institutions in Ohio, a random sample of industrial arts teachers in Ohio; and finally, effective industrial arts teachers - recruiters as they were named by present industrial arts majors.

Findings and Conclusions:

1. It was found that more than two-fifths of the present industrial arts majors had not entered college with industrial arts teaching as a career goal.
2. Three-tenths of the respondents did not enter college immediately after high school, the majority of them came from industrial employment -- some from military service.
3. The industrial arts teacher-recruiter far outweighed all others as the most influential person affecting the career choice of present industrial arts majors.
4. On the basis of the findings a cooperative recruitment program for the state of Ohio was proposed. Responsibilities were assigned to high school principals, high school industrial arts departments, the State Department of education specialist in industrial arts, teacher educators, and professional organizations. Suggestions included selected distribution of recruitment and guidance functions already in use at the high school level.

715

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Rice, Charles Mason, Mac Dougall
(Last name) (First name) (Middle name)

Exact Title Methods and Materials for Teaching Photography in the Secondary Schools.

Degree Granted Ed. D. Date 1958 No. pages in report 164

Granted By Oregon State College Corvallis, Oregon
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To obtain pertinent data on the development of instructional practices in photography in the American secondary schools to serve as a guide for instruction and aid in curriculum development.

Source of Data and Method of Research: Manufacturers' agents, pertinent literature, personal experience, and a survey of high school and college photography teachers.

Findings and Conclusions: The science and industrial arts departments in secondary schools were those best prepared to offer photography as a part of general education. Handicaps to teaching were: inadequate teaching space, dearth of equipment and good textbooks, insufficient practice materials. Recommendations are given for: planning courses of study, darkroom planning, facilities and equipment, teaching methods and materials, policies and procedures, and for improvement of instruction.

716

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Rice (Last name), Don (First name), Alexandra (Middle name)

Exact Title FACTORS AFFECTING THE PARTICIPATION OF SECONDARY STUDENTS IN VOCATIONAL EDUCATION IN THE COLUMBIA AREA VOCATIONAL-TECHNICAL SCHOOL.

Degree granted ________ Date ________ No. of pages in report ________

Granted by University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: [illegible]crofilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of the study was to identify the factors affecting the participation of secondary students in vocational education in the Columbia Area Vocational-Technical School.

Source of Data and Method of Study:

Data for the study were secured from these sources: (1) an intensive study of the literature in the fields of industrial education and attitude measurement, (2) an interview schedule completed with ten superintendents of schools and ten school board presidents in the area, and (3) information forms, including an attitude schale, administered to 222 eleventh grade students, 192 of their parents, 137 professional school people, and 43 school board members.

Findings and Conclusions:

1. Lack of participation of secondary school students in the Columbia Area Vocational-Technical School program may have been strongly influenced by the following things: (a) the majority of the secondary school districts were apparently not sufficiently involved in planning and organizing the area school to encourage their early participation in the area school program; (b) parents living within the secondary school districts showed little interest in students attending the area school because they were uninvormed about the nature and purposes of its program; (c) students, professional school p people, school board members, superintendents, and school board presidents, were not well informed concerning the objectives and ooerational procedures of the area school; and (d) transportation of students to and from the area school has been a major problem.
2. Loss of students from the secondary schools to the area school has not been a serious problem.
3. Enrollments in the Columbia Area Vocational-Technical School would probably increase provided the area school could: (a) provede more information for students, parents, school administrators, and school board members about its programs, operational procedures, and the success of its graduates, (b) provide a wider range of course offerings, (c) scedule courses more flexibly, (d) provide better means of transportation, and (e) convince superintendents and school board member of the worthwhileness of vocational education at the high school level.

717

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Rich (Last name), Mildred (First name), Kroll (Middle name)

Exact Title HANDCRAFTS FOR THE HOMEBOUND HANDICAPPED

Degree granted Ed. D., Date 1958, No. of pages in report

Granted by New York University (Name of Institution) New York, New York (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a guide to teaching handicrafts to physically handicapped pupils in a manner to meet their needs for creative expression and complement their interests.

Source of Data and Method of Study:

A sample of 311 physically handicapped students were surveyed to determine the nature of their handicap, their interests, capabilities, hobbies, recreational activities, and academic interests. This information provided the basis for developing criteria to select and/or develop appropriate handicraft projects.

Findings and Conclusions:

As a result of the survey, a guide to be used by teachers and/or parents of home - bound handicapped people, was developed. It included thirty projects arranged specifically to meet the need of certain types of handicapped pupils: (1) one hand involvement (2) two hand involvement (3) limited strength for grasping (4) limited hand-eye coordination (5) "good hands" and (6) supplementary projects. A jury of experts concluded that the projects and guide had sufficient operational validity to be useful to pupils, parents, and teachers.

718

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Richards, John, V.
(Last name) (First name) (Middle name)

Exact Title A STATUS STUDY OF INDUSTRIAL ARTS IN THE PUBLIC SECONDARY SCHOOLS OF TEXAS.

Degree granted _______ Date Jan., 1970 No. of pages in report _______

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the status and trends of industrial arts instruction in the public schools of Texas.

Source of Data and Method of Study:

The following questions were posed in an attempt to determine currect practices and trends:
1. What is the nature and scope of curriculum offerings in industrial arts?
2. What objectives of industrial arts are emphasized by teachers and principals?
3. How adequate are industrial arts facilities?
4. To what extent does the size and type of school affect the availability of industrial arts offerings?
5. What are the major problems with which industrial arts teachers are concerned?
6. What changes are being made in an effort to up-grade industrial arts programs?
7. What are the professional qualifications of industrial arts teachers?

Two questionnaires, one completed by industrial arts teachers and the other by secondary school principals, provided data with respect to industrial arts programs, facilities, and teachers.

Findings and Conclusions:
FINDINGS

1. The majority of industrial arts teachers were qualified to teach industrial arts.
2. The predominant course taught at the junior high school level was general shop with instruction in woods, drafting, metals, and electricity being common.
3. Administrative support and/or cooperation was considered a factor in the success of their industrial arts programs by almost 50 percent of the industrial arts teachers.

RECOMMENDATIONS
1. Industrial arts degree programs in Texas include more courses in the technologies of power mechanics, electricity/electronics, graphic arts, and research and development.
2. Public school industrial arts programs in Texas be restructured to reflect the ne technologies of recent years.
3. Concerted efforts be undertaken to remodel industrial arts facilities to accomoda the need for instruction in the new technologies.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Richards, Maurice, Francis
(Last name) (First name) (Middle name)

Exact Title EFFECT OF EMPHASIZING TIME IN THE TEACHING OF ENGINEERING DRAWING.

Degree granted Ph. D., Date 1950, No. of pages in report 341

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the effect on achievement in engineering drawing when emphasis and premiums are placed on the time element in teaching the subject.

Source of data and method of study:

A two group method of experimentation, involving 171 students enrolled during one semester in a basic drawing course, was used in this study. The degree of equivalency and possibilities for growth of the separate groups was ascertained. The following outcomes were measured: Information gained, skill achieved, attitudes developed toward the course, attitudes developed toward the instructor, and differences in teaching.

Findings and Conclusions:

No appreciable effect appeared to be reflected on the amount of technical drawing information gained by the students. No appreciable effect appeared to be reflected on the drawing skill acquired by the students. Students drawing under pressure of time seemed to have a higher regard for the teaching ability, fairness, and cooperation of their instructor than did those students not subjected to this pressure. Instruction factors such as ease of teaching, class discipline, pleasant relations with students, appeared to be more easily obtained by the instructor when his students were required to draw under pressure of time.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ricker, Phillip, E.
(Last name) (First name) (Middle name)

Exact Title AN EXPERIMENTAL COMPARISON OF FOUR METHODS OF PRESENTING BASIC PROPERTIES OF MAGNETISM.

Degree granted Ed.D. Date 1965 No, of pages in report 137

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To provide formal research evidence as to the effectiveness of four selected methods of presenting a unit on magnetic properties. More specifically, this study sought to determine whether or not students who had been randomly divided into a lecture only group, Group "A", a lecture and teacher demonstration group, Group "B," a lecture and student experiment group,,Group "C," and a lecture and demonstration learning group, Group D, would show any significant differences in obtaining information about magnetism.

Source of Data and Method of Study:

The population for the main study was composed of 427 students enrolled in six physical science classes at Colorado State College, Greeley, Colorado, during the fall quarter of the 1964=65 academic year. The findings and interpretations presented are based on the Pre-test, Post-test, and Retention test indicating the ability of the student to relate his knowledge of information about researcher to determine the relative effectiveness of the four different methods of teaching the unit on magnetism. Information supplied by the college was the percentile rankings from the subjects' college entrance examinations.

Findings and Conclusions:

The four methods were equally effective. In terms of retention over a period of 141 days, there were no significant results in the effectiveness of the four methods used in the study.

Since the methods appeared to be equally effective, the one requiring the least amount of the instructor's and student's time was considered to be the most efficien In this respect, method "A" the lecture only approach, was the most productive.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Rinck, Joe, Arnold
(Last name) (First name) (Middle name)

Exact Title A COMPARATIVE STUDY IN AVIATION AIRFRAME AND POWER PLANT MECHANICS--AS THEY RELATE TO CONTENT IN THE TECHNICAL SCHOOLS AND SUGGESTIONS FOR COURSE CONTENT IN THE TECHNICAL AND SECONDARY SCHOOLS.

Degree granted Ed. D., Date 1968 No. of pages in report 223

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To recommend course content for the aviation airframe and powerplant mechanic schools and to determine the feasibility of high schools offering certain courses pertinent to airframe and powerplant mechanics. In determining the recommended content for the aviation schools, the data showed differences and similarities which existed between the course content offered by the aviation schools and the needs of the repair station mechanics.

Source of Data and Method of Study:

The data used in this study were obtained by means of an open end questionnaire sent to the directors of the certified airframe and powerplant mechanic schools and to the directors of the certified airgrame and powerplant repair stations as listed. respectively, in the Federal Aviation Administration Certificated Mechanic Schools Directory and in the Consolidated Listing of FAA certificated Repair Stations. The questionnaire contained thirty-five major courses and 420 topics of information listed under these course headings. The respondents were asked to rate the topics on a four point scale as to their respective importance to the schools or to the repair station mechanics. The topics were rated as either imperative, major importance, minor importance, or unimportant.

Findings and Conclusions:

There were no great differences between the average repair stations' needs and the average schools' emphasis on the topic of information listed. The directors of the schools and the directors of the repair stations believed that the schools could feasibly offer all but one of the suggested courses in the secondary schools and that the interested aviation mechanics students would benefit by taking any of these related courses. The courses which develop problem solving ability within the students are likely to be among those courses which will be the most beneficial to them.

722

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Risher, (Last name), Charles (First name), G. (Middle name)

Exact Title RELATIONSHIP OF SCHOLASTIC ATTAINMENT TO RATED SUCCESS AS A BEGINNING INDUSTRIAL ARTS TEACHER.

Degree granted Ed.D., Date 1953, No. of pages in report 79

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relationship between undergraduate marks made in industrial arts teacher education and subsequent success as a beginning industrial arts teacher.

Source of Data and Method of Study:

From official records in 24 colleges in 14 states, data on scholastic attainment were obtained for 190 beginning teachers who had graduated in 1950 and were teaching in 29 states. Ratings on teaching success were obtained from the immediate supervisor on a scale constructed for the purpose. Correlation techniques were used in handling the data.

Findings and Conclusions:

A low but positive correlation was found to exist between rated success of beginning industrial arts teachers and college marks made in the different areas, as follows: professional courses in education--.20; technical courses--.21 academic courses--.22; all undergraduate courses--.34. Although undergraduate scholarship in industrial arts teacher education and subsequent success as a beginning teacher tend to vary together, high scholastic marks taken alone provide little guarantee of success as a teacher. Other factors such as personality, interest application, enthusiasm, etc., operate in successful teaching. The sum total of a teacher's college marks are a better predictor of teaching success than those made in any one area.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Robbins, Evelyn, Good
(Last name) (First name) (Middle name)

Exact Title THE HANDCRAFTS: A MANUAL FOR TEACHERS AND PROSPECTIVE TEACHERS OF ART.

Degree granted Ed. D., Date 1949, No. of pages in report 295

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To provide the teachers of art with materials for the extension of their field to include the crafts.

Source of data and method of study:

Course of study for art in junior and senior high schools were examined (12 in number) to ascertain what handcrafts are taught in these schools. Craft courses as given at various teachers colleges and schools preparing art teachers were considered for content. Theses already published which might contribute to give a picture of the various crafts were examined. Questionnaires were sent out to experienced art teachers (36 in number) asking for a listing of the various crafts taught and what crafts were considered desirable by the instructors.

Findings and Conclusions:

Twenty-four craft activities were finally selected as being necessary for consideration and these in turn were listed under 10 headings or classifications. Each activity under these headings is treated by: Brief explanation and history of the activity; technical information given as to the processing or manufacture of the materials used in each activity; examples are given of simple devices that have proved invaluable to teachers as teaching aids and that may be constructed in the classroom; pictures, samples and diagrams together with job analyses are given for finishing a project in each craft or activity; techniques and advice from experience liberally given; the bibliography lists books and reference materials for the complete range of activities considered; the appendix lists supply houses for materials.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Roberts (Last name), Norman (First name), Norris (Middle name)

Exact Title INDUSTRIAL ARTS EDUCATION IN KENTUCKY: AN ANALYSIS OF ECONOMIC, CULTURAL AND PROFESSIONAL TRENDS WITH POLICY IMPLICATIONS FOR THE SCHOOLS.

Degree granted Ph. D., Date 1967 No. of pages in report ________

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of Industrial Arts Education or that part of the program of general education which seeks to reflect the technology for all students from primary to adult in Kentucky.

Source of Data and Method of Study:

Seven research studies comprise the body of the sissertation as follows: Economic Trends, Cultural Nature of Kentucky, Teacher Implementation of the Technology, Nature of Industrial Arts Education, Teacher Education Trends in the State, Certification and Supply and Demand, and an Inventory of Graduates at Morehead State University.

Findings and Conclusions:

1. Resource research involving the technology, should be widely stimulated and used by all Industrial Arts teachers assure program improvement.
2. When attempting to reflect the technology, consumer as well as producer elements of the economy are involved and must be developed.
3. The technology is universal, so its educational implementation needs also to be universal.
4. Physical facilities must keep pace and methods enriched that reflect the developing economy.
5. Pilot models should be employed by all administrative jurisdictions and at all educational levels from childhood to adult, as a fundamental part of the experimentation and development required.
6. Administrative guides and course syllabi are in obvious need of development and wide adoption.
7. Teacher Education and Refresher Programs should be coordinated and extended, including in-service programs.
8. Professional prestige and leadership programs for teachers should be fostered and rewarded.
9. The teacher professional association should be extended and strengthened for all teachers.

725

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Robinson (Last name), Clark (First name), Norval (Middle name)

Exact Title A METHOD FOR OBTAINING OCCUPATIONAL INFORMATION OF VALUE TO THE SCHOOL

Degree granted Ed.D. Date 1947, No. of pages in report 114

Granted by Stanford University (Name of institution) Stanford, California (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study showing method of obtaining employment information from occupation-centered and industry-centered data.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Robinson (Last name), Frank (First name), E. (Middle name)

Exact Title BACKGROUND OF PROSPECTIVE ELEMENTARY TEACHERS IN SELECTED INDUSTRIAL ARTS ACTIVITIES.

Degree granted Ed. D., Date 1955, No. of pages in report ________

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine the experience and background of elementary industrial arts Teachers in Missouri school on the basis of activities believed desireable by specialists in the field.

Source of Data and Method of Study:

Data was obtained from 135 seniors in elementary education and 30 specialists who evaluated basic operations at the state colleges and the University of Missouri.

Findings and Conclusions:

1. There was no significant difference in the background of men and women.
2. Sixteen persons reported no experience in their areas.
3. A very small fraction of each group evaluated themselves as having no skill.
4. Half of the group expressed an attitude of liking to work in other areas.
5. Informational background was some what limited.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Robinson (Last name), Walter (First name), Julius (Middle name)

Exact Title ORIGIN AND DEVELOPMENT OF INDUSTRIAL EDUCATION IN LOUISIANA.

Degree granted Ed. D., Date 1950, No. of pages in report 370

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To trace the origin and development of industrial education in Louisiana up to 1950 and to assist in clarifying the thinking of school administrators, teachers, and laymen as to the nature and purpose of the various industrial education programs operating in the State.

Source of data and method of study:

Information was collected and compiled from the following sources: minutes of the proceedings of the State Board of Education; college catalogues; educational journals; unpublished master's theses; newspapers; reports from parish superintendents and State trade school directors; and reports from industrial organizations. From these sources data were brought together in one document revealing the background and status of industrial education in Louisiana.

Findings and Conclusions:

Industrial education began in Louisiana in 1835 in the form of a manual labor school. The first formal course of industrial education to be offered on an organized basis in the schools of Louisiana was a manual training course which began in the City High School in Monroe, 1902. In 1876 sloyd training was introduced in the preparatory department of Tulane University. In 1908 sloyd was replaced with manual training. Excluding two vocational-industrial schools in New Orleans, all vocational industrial education provided at public expense is conducted by 10 area trade schools. The State trade school movement began in 1934. Between July, 1940 and August, 1944, over 70,000 people were trained for war work in these schools. Between 1940 and 1950, War Producaion Training, distribution of war surplus property, and converting the Louisiana school system to a 12-year plan exerted the greatest influence in developing the total industrial education program in the State.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Rosin (Last name), William (First name), John (Middle name)

Exact Title A COMPARISON OF STUDENT ACHIEVEMENT BETWEEN TWO - AND THREE- HOUR TRADE AND INDUSTRIAL EDUCATION WELDING CLASSES.

Degree granted ______ Date August, 1969 No. of pages in report ______

Granted by Texas A&M University (Name of institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine differences in the level of student achievement in two-hour trade and industrial education welding classes as compared to three-hour classes.

Source of Data and Method of Study:

A welding achievement test was developed and then validated for content by a panel of jurors. It was administered to 118 students in seven schools which were located in five states. Seventy-two public secondary schools were operating either two-hour or three-hour T & I education welding classes. Invitations to participate in the study were mailed to all of the welding instructors. Twenty-eight welding instructors in eleven states accepted the invitation. The pre-test was administered to 392 students. The results were used for pairing the students by utilizing random procedures. The post-test was administered to 365 welding students in twenty-four schools. Teacher evaluation of the students' welding performance was correlated with the test results.

Findings and Conclusions:

1. Students who are enrolled in a two-hour T & I education welding class were doing at least as well as, if not better than, the students enrolled in a three-hour T & I education welding class.
2. There was no correlation between the instructors' evaluation of a student's welding achievement test results.
3. Two-hour T & I education welding programs appear to be taught by younger teachers who have less trade experience than those who are teaching three-hour trade and industrial education welding programs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Ross (Last name), Benjamin (First name), P. (Middle name)

Exact Title THE ORIGIN, DEVELOPMENT AND ADMINISTRATION OF THE RURAL-COMMUNITY VOCATIONAL SCHOOLS IN PENNSYLVANIA.

Degree granted ______, Date 1944, No. of pages in report ______

Granted by Pennsylvania State College (Name of institution) State College, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of data and method of study:

Findings and Conclusions:

730

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ross (Last name), Raymond (First name), J. (Middle name)

Exact Title ANALYSIS OF INDUSTRIAL ARTS EQUIPMENT UTILIZATION BY WORK SAMPLING

Degree granted Ed.D., Date 1966, No. of pages in report

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to develop and apply a work sampling procedure for measuring the extent of equipment utilization in industrial arts metalworking laboratories.

Source of Data and Method of Study:

A specially devised observation form was used to obtain a daily record on equipment utilization for the metal working laboratories of three separate high schools over a two and one-half month period. Observation criteria were established by a jury of experienced industrial arts teachers for determining when a piece of equipment was to be classified as "in use" and when it was to be classified "not in use".

Findings and Conclusions:

The findings of the study revealed that although there were no differences among the three programs in terms of equipment utilization, there were significant differences among selected pieces of equipment interms of the extent of their utilization. Fourteen of seventeen types of equipment were utilized considerably more for some programs than for other types of programs. Based on these findings, it was concluded that the work sample-observation method provided a suitable alternative for assessing the extent of equipment utilization in industrial arts shops.

731

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Rosser (Last name), Arthur (First name), James (Middle name)

Exact Title AN EXPLORATORY STUDY OF USING A COMPUTER IN CURRICULUM DEVELOPMENT.

Degree granted Ph.D., Date 1968, No. of pages in report ___

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This developmental study was conducted to determine the feasibility of using a computer to assist the curriculum maker during the curriculum development process.

Source of Data and Method of Study:

A sample computer program was developed and presented in detail through seven applications to the curriculum development process. The elements of a structured body of knowledge of industrial technology were used in the sample computer programs. The computer assisted in the areas of formulating objectives, providing curriculum content and experience combinations, and providing curriculum continuity checklists.

Findings and Conclusions:

The study showed computers were feasible, based on the following seven criteria:

1. time
2. cost
3. equipment
4. creativity
5. decision-making
6. inclusiveness
7. limitations

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - NAITTE - AIAA

Author Rowlett, John, D.
(Last name) (First name) (Middle name)

Exact Title An Experimental Comparison of Direct-Detailed and Directed-Discovery Methods of Teaching Orthographic Projection Principles and Skills.

Degree Granted Ed. D. Date 1960 No. pages in report 230

Granted By University of Illinois Urbana, Illinois
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To compare the effectiveness of two selected methods of instruction as measured by initial learning, retention, and transfer in a learning situation involving problem-solving with meaningful materials. The experiment was designed, in addition, to test for interaction between teaching methods and high, average, and low ability levels.

Source of Data and Method of Research: The directed-discovery method, a method involving leading questions and "hints" was contrasted with a direct-detailed procedure involving highly specific instruction. Orthographic projection principles and skills were used as the learning task.

The sample used in this study consisted of 168 ninth grade boys and girls. Seventy-two received directed-discovery instruction, and 72 were instructed by the direct-detailed method. A control group of 24 subjects received no instruction but took the 5 criterion tests. The direct-detailed and directed-discovery groups were each composed of 36 boys and 36 girls representing the three ability levels. The control group was composed of 12 boys and 12 girls representing the three ability levels.

Three testing periods were used during the experiment. Immediately following instruction the subjects completed a 50-minute initial learning test. Twelve days after treatment they were given a 50-minute retention and a 50-minute transfer test. Six weeks after treatment the retention and transfer tests were again administered.

Findings and Conclusions: The direct-detailed and the directed-discovery methods are equally effective in regard to the initial learning of orthographic projection principles and skills.

The directed-discovery method is superior to the direct-detailed method (a) with reference to the retention and application of orthographic projection principles and skills as measured 12 days after instruction; (b) with regard to transferring projection principles and skills as measured 12 days after treatment; (c) in terms of the retention and application of orthographic projection principles and skills as measured 6 weeks after instruction; (d) with respect to transferring projection principles and skills as measured 6 weeks after treatment.

There is no interaction between teaching methods and ability levels.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Rowntree (Last name), Urwin (First name), (Middle name)

Exact Title GUIDING PRINCIPLES OF VOCATIONAL INDUSTRIAL RELATED INSTRUCTION.

Degree granted Ed.D., Date 1951, No. of pages in report 155

Granted by University of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a list of guiding principles for vocational related instruction under the categories of curriculum construction practices, administrative organization, and teaching methods.

Source of data and method of study:

Data were obtained by a check list of 138 principles prepared and submitted to 784 vocational administrators, shop and related teachers in the Commonwealth of Pennsylvania.

Findings and Conclusions:

There are many principles of vocational-related instruction with which vocational personnel are in high agreement as desirable principles to follow. In a number of cases there was high agreement between theory and practice. Practice lagged considerably behind theory with respect to many principles. There is uncertainty about the desirability of certain principles. The findings of the study resulted in a list of 78 guiding principles which are rated highest to lowest by per cent of relative acceptance of the principles.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Roy (Last name), Wendell (First name), L. (Middle name)

Exact Title A COMPARATIVE STUDY OF SELECTED OBJECTIVES OF INDUSTRIAL ARTS

Degree granted Ed.D., Date 1963, No. of pages in report

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To comparatively examine and determine the degree to which three objectives of ninth grade industrial arts metalworking and woodworking were met.

Source of Data and Method of Study:

Five schools and 100 ninth grade industrial arts student within each school were randomly selected for a comparative assessment of three industrial arts objectives. Students were classified according to their experience in metalworking and woodworking and compared with a control group having no experience in either of these areas.

Findings and Conclusions:

The findings of the study indicate that ninth grade industrial arts metalworking and woodworking students score significantly higher than the control group on tests of (a) interest in industry (b) appreciation and use of materials and (c) technical skills and knowledge. It was concluded that industrial arts programs seem to be able to fulfill certain objectives in a manner which is not due to chance variations.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Rubin, Morris, Mauri
(Last name) (First name) (Middle name)

Exact Title PROCEDURES IN EVALUATING PRIVATE TRADE SCHOOLS.

Degree granted Ed. D., Date 1950, No. of pages in report 269

Granted by University of Pennsylvania Philadelphia, Pennsylvania
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To take a first step in the evaluation of private trade schools. To develop and present materials and procedures to be used in evaluating private trade school programs.

Source of data and method of study:

The approach to the problem was first made by reviewing the literature and publications of the various Federal, State and local offices and of the authorities responsible for the administration and supervision of vocational education in public and private schools. This led to the review of the rules and regulations used by the States licensing and governing private trade schools and to the review of the standards of practice recommended by various recognized agencies and associations in accrediting private trade schools for membership. Full consideration is given to program differences existing among the schools. Individuals, representing various States over the country, agencies concerned with vocational training, and private trade schools in and about Philadelphia, constituted a "jury of reviewers" for this study. The private trade school directors, who were to serve as reviewers, were asked to use the tentative draft of the evaluation materials for self-evaluation of their schools and, later, to have their self-evaluations checked by visiting committees. Accordingly, two sets of materials were sent to individuals representing 11 States and 4 agencies concerned with vocational training. In addition, 9 private trade schools (8 located in Philadelphia, one in Camden, N. J.) were contacted personally to solicit cooperation in reviewing the evaluation materials and in using the materials for self-evaluations and visiting committee evaluations in their respective schools.

Findings and Conclusions:

The materials of evaluation are proposed as the first stage of evaluating private trade school programs. It is believed that the use of these materials as part of local, regional, and national programs in private trade school education, and an application of the materials to all such programs over the country would result in obtaining data which, for all practical purposes, would be reliable as a basis for establishing standards.

736

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Rudiger, Elmer, Robert
(Last name) (First name) (Middle name)

Exact Title EDUCATIONAL NEEDS AND INTERESTS OF PEOPLE CONCERNING THE SELECTION, OPERATION, AND CARE OF THE AUTOMOBILE.

Degree granted Ed. D., Date 1952, No. of pages in report 182

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the educational needs, interests, and preferences of people concerning the selection, operation, and care of the automobile, in order that school authorities may have evidence upon which to organize automotive instruction in high school and in adult education programs.

Source of data and method of study:

Data were secured through information blanks sent to 1147 automobile owners, 547 service managers, 18 automobile manufacturers, and 139 driver trainers, plus the available literature on automotive instruction. Responses to items on the information blanks were tabulated according to category and source.

Findings and Conclusions:

The major emphasis in non-vocational automotive instruction should first be upon safe and economical operation, with proper care and maintenance, and intelligent selection ranking second and third in order. It is more important that people learn how to determine when their automobile needs adjustment and repairs than it is for them to know how to do the actual repairs themselves. Although the need for educating people in the proper selection, operation, and care of the automobile has existed for many years, the public schools unfortunately have done very little toward providing this training. Most people would like to learn more about automobile selection, operation, and care providing they could do so in a way that would be convenient and inexpensive. There is a need for courses dealing with automobile selection, operation, and care in public high schools and in adult education programs. There is a need for more comprehensive courses in public high schools relative to non-vocational automotive instruction.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ruggles, Stanford, Dean
(Last name) (First name) (Middle name)

Exact Title PLACEBO PROGRAM BRANCHING AND LEARNER SELF-CONCEPTS.

Degree granted Ph. D. Date 1969 No. of pages in report

Granted by The Ohio State University Columbus, Ohio
(Name of Institution) (City, State)

Where Available· Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study·

The problem of this study asked what relationships exist between two types of branching (placebo and non-placebo) and students with high and low self-concepts.

Source of Data and Method of Study:

A sample of 173 seventh grade boys were used in this experimental study. The California Test of Personality was given to stratify the group into two sections, a high self-concept group and a low self-concept group. The groups were given a brancing program. The programs were identical. The non-placebo brances informed the student of incorrect choices and the other didn't.

Findings and Conclusions

A "t" test was made to determine any significance between the means of the subgroups. This test revealed no significant difference between the high self-concept placebo and the non-placebo groups. Consequently, the author's first hypothesis was upheld, but the second hypothesis was not upheld. Low self-concept students did not achieve significant scores using the placebo branching program.

A "t" test comparing the scores of the high self-concept group (placebo and non-placebo) with the scores of the low self-concept group (placebo and non-placebo) revealed the high self-concept scores to be significantly higher at the .001 level of significance.

738

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Rumpf, (Last name), Edwin (First name), L. (Middle name)

Exact Title A BASIS FOR THE SELECTION OF VOCATIONAL INDUSTRIAL EDUCATION TEACHERS FOR EMPLOYMENT IN PENNSYLVANIA.

Degree granted Ed.D., Date 1954, No. of pages in report 233

Granted by The Pennsylvania State University (Name of institution) University Park, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To establish a basis for the selection of vocational-industrial education teachers with regard to employment for the all day programs in Pennsylvania.

Source of Data and Method of Study:

Data were secured from a review of literature in the field, by a jury of educators considering the selection of teachers, the present status of vocational-industrial teachers in Pennsylvania, and teacher rating by local directors.

Findings and Conclusions:

The selection factors for the shop teacher which had some correlation with teaching performance w re the age at which the teacher entered the profession, the teacher's present, age, years of industrial experience, years of teaching experience, and the number of college credits earned. The four factors which appeared to have some significance for related subjects teachers are years of teaching experience, the teacher's present age, the number of college credits earned, and the age the teacher entered the profession. A prediction equation indicates the probable potential of the shop teacher. A similar equation determines the probable potential of the related subjects teacher.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Runnalls (Last name), James (First name), Jene (Middle name)

Exact Title PLASTIC TECHNOLOGY AND ITS REFLECTION IN INDUSTRIAL ARTS TEACHER EDUCATION PROGRAMS.

Degree granted Ed.D., Date 1965, No. of pages in report 254

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To describe the body of knowledge which represents plastic technology, to ascertain the extent to which industrial arts teachers give instruction in plastic technology, and their opinions regarding the importance of the plastics area.

Source of Data and Method of Study:

The analysis and description were made from literature used in the plastics industry. Data relating to instruction in the content area were obtained from two information forms sent to 203 teacher-education institutions.

Findings and Conclusions:

1. A body of knowledge relative to the plastics industry can be identified and described.
2. Accurate related information about the plastics industry can be obtained from industrial and technical publications.
3. Production materials frequently presented in plastics courses were not the same as those used in greatest quantity by industry.
4. Little attention is given to laboratory experiences.
5. More up-to-date technical resource materials are being used in plastics courses than are used in separate units of instruction.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Russell, (Last name), Ellsworth (First name), M. (Middle name)

Exact Title AN ANALYSIS OF AREAS, UNITS, OPERATIONS AND RELATED INFORMATION OF INDUSTRIAL ARTS METALWORK FOR TEACHER EDUCATION.

Degree granted Ed.D., Date 1950, No. of pages in report 379

Granted by Pennsylvania State College (Name of institution) State College, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To survey outstanding secondary school teachers of metal work, teacher educators in industrial arts metalwork and industrial arts supervisors who were metalworking teachers to determine their evaluations of the operations and related information of 10 areas of industrial arts metal work for teacher education.

Source of Data and Method of Study:

Each selected secondary school teacher and teacher educator was asked to rate, according to their importance in teacher eeucation, prepared items of operations and related information for the areas that he was teaching. In addition, the secondary school teachers were to check those items included in their courses and to give the chief objective being stressed. Returns were divided according to the type of school, type of shop, and objective for each area. The industrial arts supervisor participants rated similar lists. Correlations were calculated to determine relationships. The areas studied were Art metal, bench metalwork, forging, foundry, jewelry, machine shop, sheet metal, spinning, arc welding, and gas welding.

Findings and Conclusions:

The aims being stressed seemed to have no effect upon the operations of items of information included in the secondary school courses. The outstanding secondary school teachers of industrial arts metalwork, teacher educators of industrial arts metalwork and industrial arts supervisors who had metalworking experience agreed very well as to the importance of the operations and items of information of the 10 areas for teacher education. The same respondents seemed to believe that work in jewelry and spinning should be elective in teacher education but the other areas should be required. The lists of operations and related information for each of the 10 areas were arranged in order of importance in teacher education as established by the 3 groups of respondents.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Russell, Jr., James, Alvin
(Last name) (First name) (Middle name)

Exact Title AN INVESTIGATION INTO THE CHANGES IN CRITICAL THINKING AND ACHIEVEMENT IN ELECTRONICS AS THE RESULT OF EXPOSURE OF SUBJECTS TO SPECIFIC TECHNIQUES OF CRITICAL THINKING.

Degree granted Ed. D., Date 1967, No. of pages in report 243

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine the effectiveness of a method of teaching electronics which involves the use of critical thinking.

Source of Data and Method of Study:

Two groups of students were given the Watson-Glaser Critical Thinking Appraisal, a standardized test, and the Electronics Achievement Test which was developed and validated by the experimenter. These tests were used for group comparison. Analysis of covariance was employed as the major statistical treatment for testing the difference between the control and experimental groups.

Findings and Conclusions:

1. A test of significant difference between the mean scores of the central group, experimental groups, and no-treatment group on the electronics achievement test resulted in a significant value of the F statistic. The null hypothesis was refuted by the data growing out of the study.

2. A test of significant difference between the mean scores of the control group and the mean scores of the experimental group on the Watson-Glaser Critical Thinking Appraisal post-test, after adjusting for pretest scores as covariate resulted in a value of the F statistic which was not significant.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Ruten (Last name), William (First name), Henry (Middle name)

Exact Title MANUAL OF METAL WORKING PROCESSES FOR ENGINEERING STUDENTS

Degree granted Ed. D., Date 1953, No. of pages in report 219

Granted by Columbia University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop instructional material for student use in courses in metal processing in engineering colleges. To overcome weaknesses in the lecture-laboratory method by providing students with laboratory instructional assignments.

Source of data and method of study:

Data were obtained by a study of metal processes and a study of existing weaknesses in the lecture-laboratory method.

Findings and Conclusions:

Developed was a laboratory instructional assignment book describing each process to be studied in the course. Student can arrange assignments and learn his responsibilities before going to the laboratory. Project also provides a complete guide for metal identification, shaping, and other processes.

743

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ryan (Last name), Robert (First name), D. (Middle name)

Exact Title A STUDY OF STUDENT PERFORMANCE IN FIRST YEAR TECHNICAL DRAWING AT St. CLOUD STATE COLLEGE AS RELATED TO CERTAIN HIGH SCHOOL COURSES AND ACT SCORES.

Degree granted Ed. D., Date 1964 No. of pages in report 130

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To investigate the relationship between high school courses in mechanical drawing, advanced mathematics, scores of selected tests of the ACT Battery and performance in college technical drawing.

Source of Data and Method of Study:

Data were gathered on 226 students who had completed technical drawing at St. Cloud State College. The subjects were divided into twenty-four sub-groups according to the high school courses they had taken and the scores achieved on the selected tests of the ACT Battery.

Statistical methods employed in the treatment and analysis of the data were: (1) Pearson product-moment correlation, (2) point biserial correlation, and (3) t-tests of significance.

Findings and Conclusions:

1. There was no correlation between the amount of high school mechanical drawing and performance in college technical drawing.
2. College entrance test scores correlate positively with success on the college level.
3. Grades earned in a specific course in high school influences success in that course on the college level, by revealing the fact that having had a specific course tends to exert a slight influence on performance in that course on the college level.
4. High school courses in mechanical drawing and advanced mathematics alone do not influence success in technical drawing, but that in combination tend to exert a slight influence.
5. These findings have a broad range of implication for those responsible for curriculum construction and academic counseling as well as those concerned with the instruction of these courses.

744

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Salmon, Daniel, A.
(Last Name) (First Name) M (Middle Name)

Exact Title THE DEVELOPMENT OF A TEACHERS' MANUAL OF COMPREHENSIVE UNITS FOR INDUSTRIAL ARTS METAL WORKING: AN INVESTIGATION OF THE LOCAL INDUSTRY AND THE DEVELOPMENT OF A MANUAL FOR TEACHERS OF METALWORKING IN INDUSTRIAL ARTS EDUCATION. PART I: THE INVESTIGATION. PART II: THE MANUAL, A TEACHERS MANUAL OF COMPREHENSIVE UNITS FOR INDUSTRIAL ARTS METALWORKING.

Degree granted Ed. D., Date 1965, No. of pages in report 293

Granted by New York University New York City, New York
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a teacher's manual for comprehensive units in a first course in Industrial Arts metalworking as reflected in the current practices for the metalworking industries in New York Metropolitan area.

Source of Data and Method of Study:

A questionnaire was sent to the heads of departments and the board of education of fifty large cities and a study was made of metal industries in the New York city area to determine the content for secondary school Industrial Arts curriculums. Through these surveys, pamphlets, bulletins and other publications were obtained which supplemented the data used to develop the teaching guide.

Findings and Conclusions:

A manual for comprehensive units in metalworking was developed and was pilot tested using several classes. A panel of experts was used to criticize and rate the face validity of the teacher's manual. More empirical tests were considered to be beyond the scope of investigation.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Sanderson, Herbert, ______
(Last name) (First name) (Middle name)

Exact Title THE RELATIONSHIP BETWEEN EMOTIONAL ADJUSTMENT AND SPATIAL VISUALIZATION AMONG HIGH SCHOOL STUDENTS.

Degree granted Ph.D., Date 1948, No. of pages in report 169

Granted by New York University New York, New York
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine whether a measurable relationship exists between emotional adjustment and spatial visualization among high school students.

Source of Data and Method of Study:

Two hundred high school boys between 15 and 18 years of age were randomly selected. The Otis Self-Administering Test of Mental Abiltiy, the Revised Minnesota Paper Form Board, the Minnesota Spatial Relations Test, the Crawford Spatial Relations Tests, and the P-S Experience Blank were administered. In addition, previous history, observations during several interviews were the basis for detecting emotional maladjustment clinically. The data was statistically analyzed.

Findings and Conclusions:

A slight positive relationship exists between spatial test scores and personality test scores. The relationship was not significantly affected by partialling out the intelligence factor. The relationship was not numerically the same for all 3 of the spatial relation tests. The qualitative examination of the clinical data indicates that the relationship may be somewhat greater than indicated by the statistics.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Sanders, Leroy, John
(Last name) (First name) (Middle name)

Exact Title Aerospace Education for Teachers Based on Recommendations of Selected Aviation and Space Industries.

Degree granted Ed. D., Date Summer 1967 No. of pages in report 167

Granted by Colorado State College Greeley, Colorado
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study: To determine content for a college program that would provide elementary and secondary school teachers with a general knowledge of aerospace based on the guidance of selected aviation and space industries. It was also concerned with ways that teachers could keep up-to-date with the industry for mutual benefits.

Source of data and Method of study: An open end opinionnaire rating scale was developed in two parts and sent in separate mailings to member companies of the Aerospace Industries Association of America, Incorporated. The first part was concerned with evaluation of fourteen direct experiences between industry and education, value rating of six indirect experiences, extend to which industry contributed to and subscribed to school publications, the best way teachers can help industry in terms of the public and the number of companies that had instructional materials for teachers. Part two presented 103 units of instruction relating to aviation, space and general impact to representatives of the industry for evaluation.

Findings and Conclusions: Teachers should make frequent pre-planned tours of aerospace industries; children's field trips require special thought and caution; resource speakers and part-time industrial instructors provide important services and liaison with the schools, utilization of school visits by industrial representatives must be improved; teacher membership in selected aerospace education associations is encouraged; periodicals published by both industry and education can provide needed two-way communications; and all teachers should be versed in matters pertaining to career guidance.

Three college courses are suggested: (1) Aerospace Education for Elementary Teachers, (2) Aviation Education for Secondary Teachers, (3) Spaced Education for Secondary Teachers.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Salten, (Last name), David (First name), George Middle name)

Exact Title THE CONSTRUCTION OF ACHIEVEMENT TESTS FOR RELATED TECHNICAL SUBJECTS IN VOCATIONAL HIGH SCHOOLS -- A NEW TEST IN COSMETOLOGY

Degree granted Ph.D., Date 1944, No. of pages in report

Granted by New York University, School of Education (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The development of evaluative instruments for related technical subjects in vocational education. The study considers the use and value of tests, individual test items and their assembly into preliminary test form and the administering of final tests to selected groups.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE + AIAA - NAITTE

Author Sargent (Last name), William (First name), T. (Middle name)

Exact Title Student Teaching in Off-Campus Programs in Industrial Arts: A Survey Directed Toward Identifying Qualifications and Responsibilities of Industrial Arts Supervisors and Cooperating Teachers and Toward Evaluating Industrial Arts Off-Campus Student Teaching Activities.

Degree Granted Ed. D. Date 1956 No. pages in report 379

Granted By Wayne State University (Name of Institution) Detroit, Michigan (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain commendable aspects of off-campus student teaching programs.

Source of Data and Method of Research: 67 supervisors and 125 cooperating teachers in industrial arts off-campus programs in the United States.

Findings and Conclusions: Characteristics and responsibilities of industrial arts supervisors are given, also recommendations for cooperating teachers, for the induction and training of student teachers, and for improving off-campus teaching programs.

749

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Sayovitz (Last name), Joseph (First name), John (Middle name)

Exact Title CERTIFICATION STATUS AND PROCEDURES FOR INDUSTRIAL ARTS TEACHERS IN THE UNITED STATES.

Degree granted Ph.D., Date 1955, No. of pages in report 26

Granted by University of Minnesota (Name of institution) Minneapolis, Minnesota (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the certification requirements for industrial arts teachers on the state level for the year 1954.

Source of Data and Method of Study:

Data were collected by means of a questionnaire, a study of state certification literature, and personal correspondence with state certification and supervisory personnel.

Findings and Conclusions:

Complete data concerning the certification requirements for industrial arts teachers in all states were presented. Tabular presentations and comparisons were made for course and semester unit requirements indicating the type and magnitude of the requirements of each state. Information concerning the various ways in which industrial arts teachers were certified in the forty-eight states, major and minor requirements, types and terms of certificates, and other factors pertaining to state requirements was presented. The present status of interstate certification for industrial arts teachers and concepts relating to a fifty year period of training were discussed.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Schaefer (Last name), Carl (First name), John (Middle name)

Exact Title A Study to Determine a Master Plan for Post-Secondary Vocational-Technical Education for the State of Ohio.

Degree Granted Ph. D. Date 1959 No. pages in report 242

Granted By The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To develop criteria and a basis for the establishment and presentation of a master plan of vocational-technical education for the State of Ohio.

Source of Data and Method of Research: Data were extracted from references and other research to determine States with a complexion similar to Ohio. Opinions were obtained from a questionnaire sent to 30 practitioners and 30 State leaders of vocational-technical education in six different States; a return of 73.3 percent was received from the questionnaire.

Findings and Conclusions: The master plan developed included plans for authorization to establish and maintain vocational-technical institutes; it provides for State financial aid as a legal basis for the establishment of post-secondary vocational-technical education.

A plan of organization and administration divides the State into 20 well-established economic areas. The establishment of two post-secondary vocational-technical institutes per economic area is cited as a realistic objective.

Plans for level of program and curriculums delineate the thinking of the experts as to actual offerings.

A plan for facilities and financing attempts to provide an adequate and realistic means of meeting capital outlay and operating costs.

A plan of supervision and instructional staff outlines the personnel designated to execute the policies set forth by the Board of Trustees and the required certification of teachers.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Schaefer, (Last name), Roger (First name), Andrew (Middle name)

Exact Title THE AIMS OF THE MISSOURI COMMUNITY COLLEGE AS EXPRESSES BY FACULTY AND ADMINISTRATORS AND PRACTICES USED IN THE COLLEGES TO DEVELOP FACULTY UNDERSTANDING OF THE AIMS OF THE COLLEGE.

Degree granted Ed.D. Date 1969 No. of pages in report ______

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain: (1) the ideal community college aims as expressed by Missouri community college faculty and administrators; (2) whether a difference existed between occupational and non-occupational faculty responses; and (3) practices used in the colleges to develop faculty understanding of college aims.

Source of Data and Method of Study:

Two researcher prepared instruments were used to gather data for the study. One was used to collect faculty and administrative responses regarding college aims. A second was used to develop faculty understanding of college aims. The form was sent to one specialist in each of twelve Missouri community colleges.

Findings and Conclusions:

Twenty-three aims were accepted and it may be concluded that in the view of faculty and administrators, these should be aims of Missouri community colleges, Five of the listed aims were questioned and two rejected.

All faculty groups in the total population were not significantly different from one another in their responses. However, administrators gave a higher item rating than faculty in twenty-eight cases and significantly higher rating on the total scale.

The fact that one relationship was found significant between faculty agreement and practice usage, indicated the possibility of relatedness of these practices to faculty agreement on the aims.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Schanbacher (Last name), Eugene (First name), Murry (Middle name)

Exact Title Identification and Analysis of Elements Versus the Conventional Approach in Teaching Drafting.

Degree Granted Ed. D. Date 1961 No. pages in report 160

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the relative effectiveness of teaching beginning drafting by identification and analysis of elements versus the conventional approach.

Source of Data and Method of Research: Data for the study were obtained by an experimental comparison of the two approaches. The study involved 80 students taught by 2 teachers and ran for 12 weeks. Statistically significant difference was ascertained by the analysis of co-variance technique with high school scholastic average being the control factor.

Findings and Conclusions: The teaching of beginning drafting by the identification and analysis approach appears to be more effective than the conventional approach with respect to number of correctly and accurately solved sketching problems. The identification and analysis approach and the conventional approach to the teaching of beginning drafting are about equally effective with respect to informational achievement, quality and quantity of drawing, attitude of students toward the course, and ability to solve sketching problems. In general, one approach is about as effective or desirable as the other. However, it is probable that some teachers can teach more effectively using the identification and analysis approach, whereas other teachers can teach more effectively using the conventional approach.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Schank, Kenneth, L.
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL ARTS SUPERVISION: A SYNTHESIS OF SELECTED SUPERVISORY PRINCIPLES AND PRACTICES.

Degree granted Ed. D., Date 1965, No. of pages in report 275

Granted by University of Maryland College, Park, Maryland
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To produce a synthesis of current literature in supervision represented by principles and practices reported by business, industry, and education which could be selectively applied to the supervision of industrial arts.

Source of Data and Method of Study:

A check list was developed through an analysis of current publications reporting problems of teachers which could be solved by supervision. Eleven functions of the industrial arts supervisor were developed. Each function was considered a separate unit.

Findings and Conclusions:

1. The supervisor of industrial arts has a job which is similar to that of middle management personnel in industry.
2. The industrial arts supervisor is unique in educational supervision because he is involved in administration as well as classroom supervision.
3. Rapid technological change has necessitated the development of principles and practices of human relations, group dynamics, and functional leadership for the industrial arts supervisor.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE & AIAA - NAITTE

Author Scherer, Harlan, Leonard
(Last name) (First name) (Middle name)

Exact Title Procedures and Factors Involved in the Selection of Industrial Arts Teachers and Their Relationship to Rated Teaching Success.

Degree Granted Ed. D., Date 1960 No. pages in report 195

Granted By University of Missouri Columbia, Missouri
(Name of Institution) City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the selection procedures and factors employed by school administrators when selecting industrial arts teachers and to evaluate the selection procedures and factors by the subsequent rated teaching success of the teachers selected.

Source of Data and Method of Research: Data utilized in the study were obtained from information forms sent to school superintendents, personnel officers, industrial arts supervisors, and school principals. The selection procedures and factors were obtained from individuals responsible for the selection of the industrial arts teacher and the subsequent success was rated by the teacher's immediate supervisor, namely, his principal. Chi-Square tests were applied to data to determine levels of confidence.

Findings and Conclusions: The majority of respondents usually or always held personal interviews, required applicants to submit transcripts of credit, required proof of legal certification, required applicants to fill out formal application blank, and collected information and opinions from persons named as references.

More than 50 percent of the school systems would not consider further an industrial arts candidate if he were not acceptable on: (1) recommendations from teacher education institutions; (2) recommendations from former school officials; (3) personality; (4) health; and (5) professional attitude.

Teachers with graduate credit were rated significantly higher than teachers with no graduate credit.

Few statistically significant differences were found to exist between selection procedures and factors employed in the selection of industrial arts teachers and the subsequent teaching success of those teachers selected.

755

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Schmidt, Jr., Fred, Julius
(Last name) (First name) (Middle name)

Exact Title THE EVALUATION OF AN ARTS WORKSHOP.

Degree granted Ed.D., Date 1941, No. of pages in report 327

Granted by Indiana University Bloomington, Indiana
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine whether the Burris Arts Workshop, Ball State Teachers College, Muncie, Indiana, developed in accordance with a particular philosophy and if it provided adequately for carrying out that philosophy. The study is limited to the procedures actually followed in the development of an arts workshop.

Source of Data and Method of Study:

Findings and Conclusions:

756

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Schoeppler, Jacob, ______
(Last name) (First name) (Middle name)

Exact Title A Case Study of Foremen's Activities and Problems.

Degree Granted Ed. D. Date 1958 No. pages in report 130

Granted By Wayne State University Detroit, Michigan
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To gain insight into the activities of production foremen, and the problems related to these activities; and to ascertain significant differences in the way the foremen and their superiors perceived these problems.

Source of Data and Method of Research: Observation of foremen going about their work and intensive interviews of foremen and their superiors.

Findings and Conclusions: The study presents a comprehensive list of the activities performed by both production foremen and general foremen, a comprehensive list of the problems related to these activities, and an analysis of the differences in importance attached to these problems by the foremen and their superiors.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Schmitt (Last name), Marshall (First name), Langdon (Middle name)

Exact Title A STUDY TO DETERMINE COURSE CONTENT IN CONSUMER EDUCATION FOR INDUSTRIAL ARTS BASED ON SELECTED DURABLE GOODS.

Degree granted Ed.D., Date 1953, No. of pages in report 160

Granted by The Pennsylvania State University (Name of institution) University Park, Penn. (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain course content in consumer education for industrial arts based on a selected list of frequently purchased durable goods, findings from certain manufacturers, and a group of outstanding industrial arts teachers.

Source of Data and Method of Study:

A group of durable goods and a sampling of manufacturers of those durable goods were selected and from them were obtained facts and information important to the selection, use and care of the goods. Learning activities based on these facts were validated by a jury and submitted to a group of selected outstanding teachers for evaluation.

Findings and Conclusions:

Seventy-eight per cent of the respondents indicated that consumer education in industrial arts is a combination of informational and manipulative work. Two techniques are offered for teaching consumer education in industrial arts. In the first, the information is brought in when needed during the regular class and/or shop period. In the second, a combination of a teaching unit with a certain amount of time set aside to meet the specific consumer objective is used. Certain learning activities were found by the respondents to be very important as curriculum content in industrial arts. These were also checked as being taught now, and it was indicated that they could be done in industrial arts shops better than in any other course.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Schorling, Horace, Oren
(Last name) (First name) (Middle name)

Exact Title SURVEY OF INDUSTRIAL ARTS SUPERVISION IN SELECTED STATES.

Degree granted Ed. D., Date 1950, No. of pages in report 175

Granted by Oregon State College Corvallis, Oregon
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To study State and local supervision of industrial arts, as it relates to: Training, experiences, policies, and procedures of supervisory personnel.

Source of data and method of study:

Statistical, analytical, and descriptive techniques were used to illustrate the training and experience of supervisory personnel--both local and State.

Findings and Conclusions:

A need exists for expansion and improvement of supervision. Special industrial arts supervisors provide better services more consistently than do general or T. & I. supervisors. Staff assistants are needed. And there is a need for clearer statements of the substance and procedure of supervision.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Schott (Last name), William (First name), Joseph (Middle name)

Exact Title THE DEVELOPMENT OF A PLAN FOR SUPERVISOR-TEACHER COORDINATION IN THE PREPARATION OF INSTRUCTIONAL MATERIALS FOR VOCATIONAL-INDUSTRIAL COURSES OF LESS THAN COLLEGE GRADE.

Degree granted Ed. D., Date 1954, No. of pages in report 407

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a plan whereby state and city supervisors can work with teachers in the field for the improvement of instruction in trade subjects in terms of skills.

Source of data and method of study:

The data were obtained from selected bibliographies, minutes of committee meetings which were comprised of teachers, craft advisory groups, administrative staff, and observations of the school shops and instructional materials.

Findings and Conclusions:

Learning should be organized on a series of operations. Flexible shop subject curricula can be developed from published instructional materials. The people who are to use the materials in teaching are the ones who, with guidance, can best plan the curriculum.

760

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Schuler (Last name), Charles (First name), A. (Middle name)

Exact Title A COMPARISON OF TWO LABORATORY TECHNIQUES FOR TEACHING BASIC ELECTRONICS IN INDUSTRIAL EDUCATION.

Degree granted Ed.D., Date 1966, No. of pages in report

Granted by Texas A&M University (Name of Institution) College Station, Texas (City,State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine the relative merits of two laboratory techniques employed in teaching basic electronics to industrial educational students at the college level. The two techniques used in this study were (a) electronic circuity on metal chasis and (b) circuit boards with connectors and pre-mounted components.

Source of Data and Method of Study:

A matched pair experimental design was used with a class of forty-eight students enrolled in a basic electronics course. Students were matched on the basis of prior performance in a prerequisite electricity course. The criterion used to access the merits of each method were (1) achievement tests, (2) troubleshooting performance, (3) laboratory exercise, (4) interest, and (5) preferences of treatments.

Findings and Conclusions:

The findings indicated that the students who received the circuit board treatment performed significantly better than the control group on tests of achievement and possessed a better attitude towards the laboratory portion of the course due to their preference for the circuit board technique. Although differences between the two treatments were observed in troubleshooting tests, controlled laboratory exercises and interest observations, the differences were not significant. In conclusion, it appeared that the circuit board technique was at least as good and, in some instances was better than, the metal chassis technique for teaching electronic circuitry.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Schultz (Last name), Irwin (First name), J. (Middle name)

Exact Title PREDICTING SUCCESS IN TRADES AND GROUPING OF TRADES.

Degree granted Ed.D., Date 1949, No. of pages in report 171

Granted by University of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine the relation between intelligence quotients and school marks and success or failure in vocational hign school shop subjects.

Source of Data and Method of Study:

Analysis and questionnaires.

Findings and Conclusions:

The best predictor of success was found to be the marks in English, science and mathematics, combined. The I.Q. was found to have predictive value in showing the importance of persistence. The follow-up of former students at the Connelley Vocational High School (Pittsburgh, Pa.) showed that high marks in vocational shop and related subjects was a good indication of success on-the job, and that those who continued until graduation were most likely to receive an "excellent" rating from employers.

768

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Scobey, (Last name), Mary-Margaret (First name), ______ (Middle name)

Exact Title INDUSTRIAL ARTS FOR ELEMENTARY TEACHERS.

Degree granted ______, Date ______, No. of pages in report ______

Granted by ______ (Name of institution) ______ (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the industrial arts education of elementary school teachers.

Source of Data and Method of Study:

Data were obtained from a review of literature and conferences with elementary education leaders. An examination of personal needs of elementary teaching credential candiates was made by using 7 instruments, given to 209 students in 3 institutions.

Findings and Conclusions:

Course offerings and objectives vary between institutions and do not coincide with the industrial arts objectives as commonly known, Elemenatary teachers need to understand and apply the principle that industrial arts is the "vehicle" use to provide motivation for content. Teacher training candidates were vague in their understanding of industrial arts and what, why, and how to use this process in the elementary grades. Many teacher training experiences are listed which would provide a broader basis of manipulative experiences and understanding.

763

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Schure, Alexander,
(Last name) (First name) (Middle name)

Exact Title THE PRIVATE TRADE SCHOOL IN NEW YORK STATE, 1937--1949.

Degree granted Ph.D., Date 1950, No. of pages in report 334

Granted by New York University New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To present a historical analysis of the private proprietary trade schools within New York State so as to give a comprehensive, cogent picture of the purposes, operations, and functions of these schools, and to identify observable trends in the development of such schools.

Source of data and method of study:

Data were obtained from bulletins of information, directives, regulations, and other pertinent meterial pertaining to New York State. The data were developed for qualitative relationships by analysis and tabular treatment.

Findings and Conclusions:

The proprietary trade schools in New York State grew tremendously as a result of the impetus of legislation affecting World War II veterans. Efforts to curb abuses in the training program caused a considerable increase in the regulation and supervision of these schools. Although the schools themselves will shrink as the World War II program terminates, the restrictions tend to remain.

764

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Scott (Last name), Charles (First name), Palmer (Middle name)

Exact Title PREDICTING VOCATIONAL INDUSTRIAL TEACHING SUCCESS.

Degree granted Ed.D., Date 1943, No. of pages in report 146

Granted by University of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study of the predictive value of certain factors in the selection of prospective vocational industrial shop teachers, both before entrance into the vocational teacher education program and before entrance into teaching.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Seal (Last name), Michael (First name), R. (Middle name)

Exact Title AN EXPERIMENT TO COMPARE STUDENT ACHIEVEMENT IN BEGINNING WELDING WHEN TAUGHT BY LECTURE-DEMONSTRATIN VIRSUS MODIFIED PROGRAMED INSTRUCTION.

Degree granted ______ Date May, 1969 No. of pages in report ______

Granted by Texas A&M University (Name of institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine how well students learn a highly manipulative skill without direct teacher help. Programmed instruction and single concept films were developed for use in the study.

Source of Data and Method of Study:

The research involved a comparison between a traditional and an experimental method to determine student learning of beginning welding. The traditional method consisted of a lecture-demonstration in which a teacher spent as much time as was required with each student teaching him to weld. The experimental method made use of programed instruction keyed to single concept film loops. The sample for the study consisted of one hundred thirty-eight Architecture freshmen at Texas A&M University who enrolled in Industrial Education 108 during the 1967 fall semester and the 1968 spring semester. Teachers A and B each randomly selected one of their classes as an experimental unit. The two remaining classes taught by these teachers became control units. All of the students were given a questionnaire asking if they had had previous welding experience. All students' welds were tested by mechanical means. Tensile strength tests and destructive bend tests were performed on all samples.

Findings and Conclusions:

1. Both experimental and control groups satisfied the objectives of a beginning welding course.
2. For an initial welding experience (pent roof welding) the modified program method is superior to the traditional approach at the one percent level of significance.
3. A significantly larger percentage of experimental group students succeeded in making satisfactory welds.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Sears (Last name), William (First name), P., Jr. (Middle name)

Exact Title THE ROOTS OF VOCATIONAL EDUCATION

Degree granted Ph. D., Date 1930, No. of pages in report 383

Granted by New York University School of Education (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A review of origin and development of organized and controlled vocational education, with emphasis on trade and industrial education. The influence of the industrial, political, social, and educational fields is considered.

Source of data and method of study:

Findings and Conclusions:

76

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Sechrest (Last name), Charles (First name), H. (Middle name)

Exact Title THE SUPERVISION OF INDUSTRIAL ARTS: EFFECTIVE PRACTICES FOR SELECTED MAJOR PROBLEMS.

Degree granted Ed. D., Date 1953, No. of pages in report 228

Granted by Wayne State University (Name of institution) Detroit, Michigan (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To assemble a list of major problems in the supervision of industrial arts, identify those which were common, select those judged to be most pressing, and search for and report practices judged to be effective.

Source of data and method of study:

Data were obtained by personal interviews with supervisors, teachers, graduate students, and faculty members of the Industrial Teacher Education Department of Wayne University. Other problems were suggested by letters and by literature pertaining to the supervision of industrial arts.

Findings and Conclusions:

The supervisor of industrial arts should establish a program for upgrading in-service teachers, maintain morale, encourage professional attitudes, and establish effective techniques for improving the instructional program. They should also help teachers prepare curriculum materials and acquaint administrators, parents, and others with an understanding of industrial arts.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Seckendorf, Robert, Sidney
(Last name) (First name) (Middle name)

Exact Title THE NEW YORK STATE STEERING COMMITTEE FOR INDUSTRIAL ARTS

Degree granted Ed. D., Date 1960, No. of pages in report ______

Granted by New York University New York City, New York
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To trace the origin and growth of the New York State Steering Committee for Industrial Arts from 1939 through 1959.

Source of Data and Method of Study:

Primary and secondary sources of data were used to trace the historical development of the Industrial Arts Steering Committee in New York State. Relationships among the viewpoints, policies and practices of various associations and leaders were made.

Findings and Conclusions:

Based on the historical data, the findings suggest that the major responsibilities of the Steering Committee have traditionally been to: (a) Conduct studies and discuss problem areas (b) encourage the development of Industrial Arts Clubs and (c) develop promotional policies and programs to improve programs through leadership development and assistance. It was concluded, that many of the activities of the Committee be made explicit and that steps be initiated to strengthen certain functions.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Sedgwick (Last name), Lorry (First name), King (Middle name)

Exact Title THE EFFECTIVENESS OF GRAPHICS AS A BASIC COMMUNICATION MEDIUM.

Degree granted Ph. D., Date 1965, No. of pages in report 189

Granted by Purdue University (Name of institution) Lafayette, Indiana (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To develop and test the feasibility of incorporating graphic communication, as a basic communication medium, into the general-liberal education of all students.

Source of Data and Method of Study:

The rationale for graphic communication as a basic communication medium within general-liberaleducation was developed. To test the effectiveness, it was compared with a contemporary, five week, industrial arts drawing course. Both courses were administered to randomly assigned halves of an eighth grade male population. The classes were, in turn, randomly assigned to two teachers. A 2X2 analysis of variance was used to organize the data.

Findings and Conclusions:

The hypotheses tested concerned questions of teacher effectiveness, treatment effectiveness, and interactions between teachers and treatments. The results of the tests of the hypotheses indicated:

1. There was no difference in teacher effectiveness.
2. There was no teacher interaction with treatments.
3. That the instruction which emphasized graphic communication as a basic communication medium could be successfully learned by students without materially jeopardizing learning of the more conventional subject matter.

The conclusions indicated:

1. There is a justifiable need for instruction in graphic communication within the general-liberal education experience of all students.
2. That such instruction can be presented effectively,
3. That the industrial arts curriculum could provide graphic communication instruction.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Seefield, , Kermit , A.
(Last name) (First name) (Middle name)

Exact Title THE COMPETENCES OF INDUSTRIAL ARTS TEACHERS.

Degree Granted Ed.D. , Date 1949 , No. of pages in report 258

Granted by Stanford University Palo Alto, California
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine the qualifications and characteristics which a good industrial arts teacher must have.

Source of Data and Method of Study:

A questionnaire was devised and submitted to teacher educators, supervisors, and coordinators of industrial arts. This questionnaire was divided into three parts: Ranking of objectives, Rating of Characteristics, Ranking of characteristic groupings.

Findings and Conclusions:

Success, while dependent in the final analysis on the bahavior of the teacher and the subject matter achievement of the student, is actually measured by the citizenship qualities in the boys and girls who take industrial arts.
Success of the industrial arts teacher in this study was rated in terms of the citizen product as determined by the personal and professional characteristics of the teacher.

77

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Seehoff (Last name), Jesse (First name), ______ (Middle name)

Exact Title HAND CRAFTS CURRICULUM FOR DULL NORMAL PUPILS: ITS IMPORTANCE IN CRIME PREVENTION.

Degree granted Ed.D., Date 1942, No. of pages in report ____

Granted by New York University (Name of institution) Washington Square, N. Y. (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA

Author Seidel (Last name), John (First name), Jacob (Middle name)

Exact Title A PLAN FOR STUDYING VOCATIONAL-INDUSTRIAL AND VOCATIONAL-TECHNICAL EDUCATION PROGRAMS.

Degree granted Ed. D., Date 1951, No. of pages in report 492

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To provide an effective plan for making comprehensive evaluations of Vocational-Industrial and Vocational-Technical Education programs.

Source of data and method of study:

Data for use in developing the techniques and instruments were obtained from a group of educators representing both general and special education. The resolved plan was a result of trail-revision, and the cooperative effort of the evaluator and those evaluated, aimed at improvement from within.

Findings and Conclusions:

In using these evaluative devices in New York City the following proposals resulted: Guidance services should be available to all youth at all levels. Courses in vocational education should be offered during those years just prior to employment. More broadly conceived exploratory courses should be organized for the 7th, 8th and 9th grades in all schools. Certain changes should be made in the recruitment, assignment, and improvement of professional personnel. A continuous city-wide planning program for vocational education should be developed. The relationship of the vocational advisory board to the board of education should be clarified and activities of the advisory board should be extended. Many adjustments should be made in both the academic and vocational high schools to provide a broader program. As soon as possible new buildings and new equipment should be provided for the vocational program. Equipment and supplies should be increased and handled more effectively. The placement program for graduates as well as 'drop-outs' should be strengthened. Services offered by the State Department of Education should be expanded. Instructional procedures should be improved. Part-time cooperative education should be expanded and a diversified occupations program should be developed. There should be a continuous evaluation plan for the further development of vocational education program.

773

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Sellon, William, A.
(Last name) (First name) (Middle name)

Exact Title A STUDY OF METHODS OF EVALUATION AND THEIR APPLICATION TO INDUSTRIAL ARTS WITH SUGGESTIONS FOR THE CONTENT OF A COURSE IN TECHNIQUES OF EVALUATION.

Degree granted Ed. D., Date 1950, No. of pages in report 186

Granted by Bradley University Peoria, Illinois
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine what techniques of evaluation might be used by industrial arts teachers in determining student progress, and to determine what might be included in a techniques of evaluation course on an undergraduate and/or graduate teacher training level.

Source of data and method of study:

Documentary, questionnaire (random sampling), and questionnaire (jury technique).

Findings and Conclusions:

The evaluative process is necessary to a dynamic education. This process must be comprehensive and continuous to cover the various facets of the individual student, and it must be in terms of the course or area objectives. The process must also aim toward helping the student in light of the evaluative results . The evaluative cycle, throughout the years of education, started as a highly subjective process, and moved to a rather objective state. It is now returning to a point where an evaluative framework is being built using the good points of the objective type and the subjective or "estimated" type of evaluation. Evaluation in all areas of education and philosophy tends to bring about a great deal of disagreement between "authorities," due to the subjective and abstruse characteristics of those values upon which evaluation must be based. Industrial arts teacher education majors on the graduate and undergraduate level can profit from a course in techniques of evaluation offered in the area of industrial arts. A brief outline of this suggested course is also given in one of the concluding chapters.

774

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Senteney (Last name), George (First name), William (Middle name)

Exact Title FACTORS RELATING TO THE CHOICE OF INDUSTRIAL EDUCATION TEACHING AS A CAREER AND THE RETENTION OF THESE TEACHERS IN THE PROFESSION

Degree granted Ed. D., Date 1955, No. of pages in report 116

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to ascertain the factors influencing men who enter industrial teacher education programs, why they choose either teaching or other occupations after this training, how teaching and non-teaching graduates compare as to background, and how these two groups fare in relation to each other.

Source of Data and Method of Study:

Data for the study were collected through an information form mailed to men who received their bachelor's degrees with majors in industrial education institutions throughout the United States. Usable forms were received from 1356 graduates.

Findings and Conclusions:

1. The most important factors given for selection of industrial education as college major were "interest in that type of work," "high school shop experience, and "work experience."
2. Over one-half of the graduates who left or did not enter teaching gave salary as the major cause.
3. Those graduates who are reared in smaller communities are more likely to remain in teaching than are those from larger cities.
4. The major reason given for entering the teaching profession was the fact that he was trained to be a teacher.
5. In order for a person to obtain the maximum salary from his teaching position he should, if possible, teach solely industrial education courses and obtain the master's degree.

SOURCE SHEET FOR SUMMAREIS OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Sexton, William, E.
(Last name) (First name) (Middle name)

Exact Title DESIGN INSTRUCTION IN INDUSTRIAL ARTS TEACHER EDUCATION: A CURRICULUM ANALYSIS WITH OPINIONS OF EDUCATORS, INSTRUCTION SPECIALISTS, AND INDUSTRIAL DESIGNERS REGARDING CONTENT AND INSTRUCTIONAL PRACTICES.

Degree granted Ed.D., Date 1965, No. of pages in report ____

Granted by ____________
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the reactions of industrial designers regarding content and status of instruction in industrial arts and determine the extent of agreement between designers and educators, and instruction specialists and educators, in regard to content and instructional practices.

Source of Data and Method of Study:

Data were obtained from forms mailed to 103 design educators, 9 instruction specialists, and 30 industrial designers. Data pertained to design content, instructional practices, instructional resources, participants' background and department information.

Findings and Conclusions:

1. Seventy-nine schools offered at least one design course.

2. Sixty-one schools required at least one design course.

3. Sixteen schools offered no design courses.

4. Art, home economics, architecture, and design offered 122 design courses in 50 schools. Art offered 95.1 percent of the courses.

5. Design educators used 75 different textbooks, 96 reference books, 50 periodicals, and 83 audio-visual resources.

6. The number of industrial arts departments will increase 65 percent during 1960-1970.

776

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Shackelford, , Richard , W.
(Last name) (First name) (Middle name)

Exact Title PROBLEMS OF THE BEGINNING INDUSTRIAL ARTS TEACHER.

Degree granted _____, Date _____, No. of pages in report _____

Granted by _____
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To help prospective teachers with the techniques and insights that will minimize the effects of problems the beginning industrial arts teacher meets.

Source of Data and Method of Study:

Data were secured through correspondence and visits with industrial arts teachers, department heads, and faculty members training teachers.

Findings and Conclusions:

This study shows the problems industrial arts teachers must be prepared to meet.

77

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Shafer (Last name), Carl (First name), Ivan (Middle name)

Exact Title A Study of the Evaluative Practices in Management Education and Development Programs in Selected United States Industries.

Degree Granted Ed. D. Date 1961 No. pages in report 130

Granted By Michigan State University (Name of Institution) East Lansing, Michigan (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To study the theoretical aspects and the practices of evaluation of formal management education and development programs in industry.

Source of Data and Method of Research: The theoretical aspects of educational evaluation were synthesized from the literature of education, psychology, and business. Major published evaluative research was reviewed and analyzed. A survey of evaluative practices was made by sending a detailed questionnaire to 158 large companies. 74.6 percent of the questionnaires were returned and revealed the current practices of evaluation of management training programs in the selected industries.

Findings and Conclusions: Slightly over half of the training departments of companies represented in the survey spend 1 to 5 percent of their time on evaluation of their management training programs. Rarely do they spend more than 10 percent of their time on evaluation. Nearly all companies that responded spent 5 percent or less of their training budget on evaluation. Evaluation effort, in terms of time and budget, appeared to be greater in companies where top management stresses the evaluation of management training programs as compared to those where top management shows little or no interest in evaluation of management training. The major deterrent to effective evaluation indicated by respondents was that evaluation research techniques were difficult to apply in productive situations. It was also found that the research techniques which are available are inadequate and are too likely to be influenced by variables and other factors in an industrial situation. The study showed the selected companies are engaged, at least to some extent, in effective evaluation activities and are somewhat cognizant of what effective evaluation includes.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Shanthamallappa, B., L.
(Last name) (First name) (Middle name)

Exact Title A PLAN FOR THE DEVELOPMENT OF VOCATIONAL EDUCATION IN THE STATE OF MYSORE, INDIA.

Degree granted Ph.D., Date 1950, No. of pages in report 215

Granted by University of Michigan Ann Arbor, Michigan
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To present a plan for the development of vocational educational in the State of Mysore, India, primarily at the secondary level.

Source of data and method of study:

The social and economic conditions in Mysore were analyzed for their implications for desirable and essential education for workers in the State. The aims and objectives of education in the U. S. were used as reference-guides for evolving the plan.

Findings and Conclusions:

A plan is presented which incorporates the following salient features: A permanent agency should be established in the State Department of Industries and Commerce to conduct an occupational survey, to analyze and classify occupations, to furnish information concerning the occupational demands and trends of the State. A comprehensive program of vocational guidance should be set up in the secondary schools to help young people to choose an occupation, prepare for it, enter and progress in it. Practical instruction in junior high school should provide general education to pupils as well as an opportunity to explore the possible occupational avenues. The industrial, agricultural and commercial schools should be reorganized and expanded to meet some of the occupational needs of society. The responsibility for training women as homemakers should be transferred from the home to the school. All phases of vocational education should be placed under the control of the Department of Public Instruction to secure the proper coordination and unity in the total educative process.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Shemick (Last name), John (First name), Magnusen (Middle name)

Exact Title Evaluating Initiative and Self-Reliance in Industrial Arts Classes.

Degree Granted Ed. D. Date 1960 No. pages in report 136

Granted By University of Illinois (Name of Institution) Urbana, Illinois (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To develop and test a self-administered, forced-choice inventory for evaluating initiative and self-reliance in a high school industrial arts class.

Source of Data and Method of Research: An observation scale was developed, and was used to rate 182 high school industrial arts students' initiative and self-reliance while in industrial arts classes. These ratings served as criterion scores upon which the forced-choice instrument was developed. The forced-choice inventory was validated with a new group of 75 students who had been rated through observation.

Findings and Conclusions: The coefficients of correlation between observation ratings and forced-choice inventory ratings ranged from --.02 to .15. None of these was statistically significant.

It was concluded that the forced-choice, self-administered inventory, as developed, was not valid for evaluating initiative and self-reliance in industrial arts classes.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Sherman (Last name), Douglas (First name), Roland (Middle name)

Exact Title The Emerging Role of Vocational-Terminal Education in the Public Community.

Degree Granted Ed. D. Date 1956 No. pages in report 298

Granted By Wayne State University (Name of Institution) Detroit, Michigan (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the status and future developments of vocational-terminal education in public community colleges of Michigan.

Source of Data and Method of Research: Literature on the community college, catalogs of Michigan community colleges, visits to each college, a booklet explaining the status of community colleges, and a checklist sent to 91 leaders in education to ascertain their opinions of the future developments.

Findings and Conclusions: A strong tendency existed to force all training programs into a 2-year schedule. The vocational-terminal offerings were not as broad as desired, the majority of all curriculums being in the area of business education. Cooperative work-study programs needed emphasis. The objectives of many curriculums were vague. The enrollment of vocational-terminal education varied widely between colleges. The efficiency of follow-up and placement procedures was questionable. The instructors in the vocational-terminal were well qualified. Most of the community colleges had inadequate physical facilities and administrative personnel.

781

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Shibler (Last name) Herman (First name), L. (Middle name)

Exact Title COOPERATIVE VOCATIONAL EDUCATION AND THE PUBLIC SCHOOL.

Degree granted Ph. D., Date 1941 No. of pages in report 493

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available· Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

How can the American high school cooperate more fully with employees and other groups in the vocational training of youth?

Source of Data and Method of Study:

A questionnaire was sent to the forty-eight state departments of education, to selected professors of education, superintendents and principals, and to schools which are doing significant work in cooperative secondary education.

Findings and Conclusions·

All school teachers, school officials, and educators in general should: (1) disabuse their minds of an outmoded conception of the difference between cultural and vocational education. (2) should critically reexamine the traditional and modern conceptions of learning and teaching and base their practices upon sound principles. (3) enlarge their conception of secondary education. (4) enlarge their conception of the meaning and place of guidance. (5) study current social and economic life. (6) make and study the results of youth surveys of their own community. (7) Community councils should be created to study the welfare of youth in every school district. (8) The Federal government should establish a National Youth Commission that would function as an advisory group in the U.S.O.E.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Shih (Last name), Wei-tun (First name), (Middle name)

Exact Title THE CORRELATION AMONG FACTORS RELATED TO MEASURING ABILITY

Degree granted ______ Date May 1969 No. of pages in report ______

Granted by Texas A&M University (Name of institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To examine certain human factors or abilities which could affect or relate to measuring ability in machine-shop practices at the high-school level. Eight variables--intelligence, age, visual acuity, kinesthetic sensitivity, numerical ability, mechanical knowledge, finger dexterity, and spatial perception--were tentatively selected.

Source of Data and Method of Study:

A sample of 157 male students enrolled at four metropolitan high schools in Chicago was chosen for this investigation. Tests were used to evaluate the students' abilities and achievements in various areas.

Findings and Conclusions:

1. There was no correlation between the score on intelligence test and the score on measuring ability test at the high-school level.
2. The partial correlation coefficient between numerical ability and measuring ability was found to be 0.03. This positive correlation is significant at the 0.01 level.
3. The correlation of 0.21 between measuring ability and mechanical knowledge is significant at the 0.01 level.
4. Visual acuity as tested by the use of the common eye chart was found not to be related to the ability to perform measuring tasks at the high-school level.
5. There is no correlation between the number of machine-shop courses taken and the accuracy of measurement in using common measuring instruments.
6. A partial correlation of shopwork achievement and measuring ability resulted in a coefficient of 0.42.
7. There was a low and positive correlation between kinesthetic sensitivity and accuracy in measuring at the high-school level.
8. Spatial perception was found to be correlated with measuring ability.
9. The level of maturity was found not to be a factor that could affect measuring ability at the high-school level.
10. A partial correlation coefficient of 0.31 between finger dexterity and measuring ability is significant at the 0.01 level.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Shoemaker (Last name), Byrl (First name), Raymond (Middle name)

Exact Title Adequacy of Related Technical Instruction in Vocational Trade and Industrial Education in Teaching Principles of Mathematics and Physical Science.

Degree Granted Ph. D. Date 1957 No. pages in report 154

Granted By The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain whether the plan used in Ohio to teach related technical information in trade and industrial education programs is effective in teaching principles of mathematics and physical science needed by the graduates.

Source of Data and Method of Research: A jury of teachers and evaluations of the program by graduates and supervisors of the graduates.

Findings and Conclusions: Teachers, graduates, and supervisors agreed on the mathematics and physical science need for the machine trade. Graduates indicated improvement in instruction was needed. The plan of instruction used was good but needed review and improvement.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Shoemaker (Last name), Charles (First name), E. (Middle name)

Exact Title Instructional Materials in Industrial Arts: An Appraisal of Instructional Materials Prepared by Industry for Home-Use Equipment for Use in Industrial Arts.

Degree Granted Ed. D. Date 1961 No. pages in report 154

Granted By University of Maryland (Name of Institution) College Park, Maryland (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To appraise instructional material prepared by industry for home-use equipment and to ascertain the appropriateness of these printed instructions as teaching materials for industrial arts.

Source of Data and Method of Research: Samples of 221 instructional materials consisting of printed directions for 34 products used in and about the home were analyzed in the study. The analysis consisted of a description of the samples for each product line according to the principles of layout, typography, content and organization, and methods of illustration. In addition, the materials were appraised by an instrument consisting of 45 items selected by a dual jury of professors from the fields of industrial arts and home economics. Each item or statement identified a characteristic of instructional material that would make the printed materials of value for utilization in industrial arts.

Findings and Conclusions: Instructional materials for home-use equipment were found to be inappropriate for general use in industrial arts. However, there were samples of printed materials that were rated on the upper scale of value which indicated the availability of better samples in each product line. The study disclosed that the booklet type of materials was the major style of the industries represented. The printed materials varied in readability level from the 7th to the 8th grade through the 11th and 12th as measured by the Dale-Chall Formula. Major shortcomings of the materials were lack of safety instructions, lack of specific references to illustrations and explanation of how equipment functions, and failure to identify incorrect functions of equipment in case of difficulties in operation.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Silvey, Wray, D.
(Last name) (First name) (Middle name)

Exact Title ABILITY AND SCHOLASTIC SUCCESS IN HIGH SCHOOL AND COLLEGE OF DIVERSIFIED OCCUPATIONS STUDENTS VERSUS NON-DIVERSIFIED OCCUPATIONS STUDENTS.

Degree granted Ed.D., Date 1950, No. of pages in report 128

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To compare the ability and scholastic success in high school and college of students who had Diversified Occupations in high school with students who did not have Diversified Occupations in high school, and thus to determine whether Diversified Occupations students are good college risks.

Source of Data and Method of Study:

Information forms were sent to 54 coordinators in as many Missouri high schools to obtain the names of the 1945-49 graduates having had Diversified Occupations and later entering college. The names of the colleges in Missouri which these students had attended or were attending were obtained. These colleges were then visited and the necessary information obtained.

Findings and Conclusions:

The mental abilities of the Diversified Occupations Grouping going to college, as measured in high school, were slightly higher than those of the Non-Diversified Occupations Group going to college. The high school percentile rank of the Non-Diversified Occupations students was slightly higher than that of the Diversified Occupations students. The number of credits earned in high school by the Non-Diversified Occupations Group was slightly more than those earned by the Diversified Group. The extent to which the 2 groups participated in extra-curricular activities was about the same. More Diversified Occupations students than Non-Diversified Occupations students participated in one activity. However, more Non-Diversified Occupations students participated in four or more activities. Slightly more students in the Diversified Occupations Group than in the Non-Diversified Occupations Group were elected or appointed to a student office in high school.

786

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Silvius, G., Harold
(Last name) (First name) (Middle name)

Exact Title INSTRUCTIONAL UNITS FOR PROFESSIONAL COURSES IN UNDERGRADUATE INDUSTRIAL ARTS TEACHER EDUCATION.

Degree granted Ed.D., Date 1946, No. of pages in report 460

Granted by Pennsylvania State College State College, Pennsylvania
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An analysis of the relative importance of 160 units of professional preparation of undergraduates in industrial arts education based upon a survey of 750 outstanding teachers of industrial arts, eighty of whom were classified and whose responses were treated as a special group of the highest type.

Source of data and method of study:

Findings and Conclusions:

787

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Simich (Last name), Jack (First name), (Middle name)

Exact Title COMPARATIVE EFFECTIVENESS OF SELF-INSTRUCTION METHODS OF LEARNING INCLUDING PROGRAMMED INSTRUCTION AND THE CORRESPONDENCE-COURSE TECHNIQUE IN THE CLASSROOM SITUATIONS.

Degree granted Ph. D., Date 1965, No. of pages in report 228

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to compare a self-instructional method based on a correspondence course and a programed method of instruction.

Source of Data and Method of Study:

Data was obtained from 3 classes of seventh grade industrial arts students. By use of the Forge-Thorndike intelligence test two average classes and one above average class was formed.

Findings and Conclusions:

The reported gain scores on the initial learning indicated that students in the correspondence-course technique gained significantly more knowledge than students of the programed group. The three week delayed examination revealed that the correspondence-course group retained more than the programed group; however, this difference was not significant. The data obtained from the study further revealed that there was a substantial gain at the upper and lower levels in each of the treatments.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Simons (Last name), Jerold (First name), Jean (Middle name)

Exact Title RELATIVE UNDERSTANDING OF MATHEMATICAL CONCEPTS BY STUDENTS MAJORING IN ELECTRONICS TECHNOLOGY

Degree granted Ed. D. ,Date 1967 ,No. of pages in report _____

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to identify the mathematical concepts needed by entry-level electronic technicians and to determine the relative understanding of such concepts by post high school electronic institute graduates.

Source of Data and Method of Study:

A list of basic electronic concepts was developed by critically reviewing textbooks and then submitting the list to a panel of experts for approval. The list was then sent to 568 electronic industries throughout the country where industrial personnel identified the mathematical concepts for entry-level electronics technicians. A instrument was designed to test a national sample of 1,556 graduates of two year post high school electronic programs and 1116 graduates of four year electronic institutes.

Findings and Conclusions:

The findings of the study indicated that (a) electronic instructors are not placing enough emphasis on specific entry-level mathematical concepts, (b) it is possible to develop and standardize a diagnostic achievement test of entry-level mathematical concepts and (c) relatively few textbooks contain all the mathematical concepts which were identified as essential for entry-level electronic technicians.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Singletary, Thomas, A.
(Last name) (First name) (Middle name)

Exact Title An Analysis of Metal Finishing Technology and Its Status In Industrial Teacher-Education.

Degree Granted Ed. D., Date 1968 No. pages in report

Granted by University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To analyze and describe the technology of metal finishing and to ascertain its status in instructional programs of industrial teacher-education.

Source of Data and Method of Study: The analysis and description of metal finishing technology was made from engineering handbooks, technical metal finishing publications, and the Metal Finishing Guidebook Directory. An information form was used to gather data relative to the status of metal finishing instruction in the industrial teacher-education programs listed in the Industrial Teacher Education Directory that offered a B. S. degree in industrial arts education.

Findings and Conclusions: Industrial teacher-educators have the potential resource materials necessary to provide accurate information about metal finishing in their instructional programs. Industrial teacher-education institutions are not adequately teaching metal finishing production processes and materials. Metal finishing production processes are represented to a greater extent than are the production materials in industrial teacher-education programs. Many industrial teacher-education institutions lack the necessary equipment to assimilate various industrial processes of metal finishing. Institutional training rather than industrial experience is the most frequent avenue through which teachers get training in metal finishing. Many industrial teacher-educators are not familiar with numerous metal finishing technical publications. Industrial teacher-educators recognize that metal finishing technology should be included in their instructional programs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Siro, (Last name), Einar (First name), E. (Middle name)

Exact Title PREPARATION AND UP-GRADING OF INDUSTRIAL EDUCATION PERSONNEL.

Degree granted Ph.D., Date 1949, No. of pages in report 642

Granted by Univeristy of Minnesota (Name of institution) Minneapolis, Minnesota (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To provide an over-all picture of industrial teacher education with its many ramifications, and to provide a brief description of its development.

Source of Data and Method of Study:

Data were obtained from a canvass of related literature, study of descriptive catalogues and course schedules, and questionnaires completed by Chief State School Officers, Heads of Industrial Education Departments in colleges and universities, and State Supervisors of Industrial Education.

Findings and Conclusions:

The study revealed a need for clearer definition of objectives, standardized titles of departments, and provision of both general and unit shops; more offerings of course construction techniques at the undergraduate level; a broad list of manipulative areas accepted by most institutions; analysis of teacher duties to determine course content; observation and practice teaching in trade classes for vocational-industrial education majors; better selection of staff; in-service training program; better defined bases for promotion; better selection of candidates; an acceptable plan for the evaluation of trade experience; standardized certification; and, a more flexible policy of vocational-industrial teacher certification.

791

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Smalley, Lee, H.
(Last name) (First name) (Middle name)

Exact Title THE DEVELOPMENT AND FEASIBILITIE OF MASS PRODUCTION AS AN EDUCATION EXPERIENCE IN INDUSTRIAL ARTS.

Degree granted Ed. D., Date 1962, No. of pages in report

Granted by Michigan State University East Lansing, Michigan
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To study the development and feasibilitie of mass production as an education experience in industrial arts.

Source of Data and Method of Study:

To test for feasibility, several industrial arts teachers were asked to teach a unit on mass production in one of their classes. The writer observed and evaluated their endeavors. A written test over knowledge of mass production was given to students who had participated in a mass production unit. This test was also given to control groups, or if no control groups were available, a pre-test and a post-test were given to the experimental group. Generally the experimental groups scored significantly higher than the control groups, who had no organized contact with mass production.

Findings and Conclusions:

Based upon the response the author received from teachers who were willing to teach a unit on mass production, it would seem that industrial arts teachers are willing to improve their teaching, especially if a little assistance is offered. Using average teachers, facilities, and students, a product may be mass produced in an industrial arts laboratory and significant behavior changes can take place because of it. Generally, the only important change that needs to take place in order for a mass production experience to be included in the industrial arts curriculum is in the values of the industrial arts teacher.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Smith (Last name), Darrell (First name), L. (Middle name)

Exact Title AN EXPERIMENTAL COMPARISON OF PROGRAMMED INSTRUCTION AND LECTURE-DEMONSTRATION METHODS OF TEACHING DESCRIPTIVE GEOMETRY.

Degree granted ________, Date May, 1969 No. of pages in report ______

Granted by Texas A&M University (Name of institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop programmed instruction booklets and measure their effectuveness for self-instruction in descriptive geometry at the college level.

Source of Data and Method of Study:

Programmed booklets and testing instruments were devised for the instruction of three units selected at random from the descriptive geometry course outline. A pilot study was conducted utilizing the materials in a class of twenty students. With the knowledge gained in the pilot study and suggestions and recommendations of the participating students taken into consideration, the research materials were revised and developed in final form. A pretest was administered at the beginning of the semester, and a unit test was given immediately following the instruction of the selected unit. The three unit tests were analyzed as a posttest and compared to the pretest.

Findings and Conclusions:

The conclusions formulated from the analysis of data collected through this research indicated that there was no significant difference between the treatments separately; however, the programmed materials did aid the students when used as a supplement to the regular lecture-demonstration.

Additional generalizations are:

1. Some of the teachers plan continued usage of the programmed booklets because they were readily accepted by their classes.
2. The students enjoy using the programmed booklets and feel that they are a good supplement to a teacher's lecture.
3. The teachers, utilizing various instructional methods in presenting descriptive geometry material, possess varying attitudes toward the importance of some units in the course, and obtain varying degrees of success through their instructional techniques.

793

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Smith, Freddy, Jackson
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF THREE TEACHING METHODS FOR TECHNICAL DRAWING.

Degree granted Ed. D., Date 1970, No. of pages in report 69

Granted by University of Arkansas Fayetteville, Arkansas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to investigate experimentally the relative effectiveness of three methods of instruction for teaching content material in four units of technical drawing, as measured by initial learning and retention. The three methods were programmed instruction with supervision, Group A; programmed instruction without supervision, Group B; and lecture-demonstration instruction, Group C. Also study was designed to test for any effect that 11 variables had on initial learning and retention. These were: (1) Reading Comprehension Test, Form 1A, (2) Pre-test, (3) Nine-weeks test, (4) Post-test, (5) Semesters of drawing, (6) Classification, (7) Age, (8) Commuting, (9) Military status, (10) Marital Status, and (11) Employment.

Source of Data and Method of Study:

Data were secured from personal data sheets and testing of thirty-five automotive technology students enrolled in graphic communications in the School of Technology, Kansas State College of Pittsburg, Pittsburg, Kansas, who were assigned randomly to two treatment groups and to the control group, the sessions lasting for nine weeks.

Findings and Conclusions:

All conclusions are based on the population, treatments, tests, and conditions used in the experiment. They are: (1) the three teaching methods are equally effective in terms of initial learning and retention, (2) there were significant positive correlates of retention, and (3) the full model identified and eliminated seven variables as not independent predictors of retention scores.

From the findings of this study, these recommendations for educators are the most salient:

1. To expand their use of programmed instruction in teaching a minimum competence in drawing and other skill courses.
2. To facilitate the students' and teachers' time and effort.

794

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Smith, Herbert, Edward
(Last name) (First name) (Middle name)

Exact Title THE HISTORICAL DEVELOPMENT OF TECHNICAL EDUCATION IN THE FIRST NINE COLLEGES FOUNDED IN THE UNITED STATES, 1636 - 1862.

Degree granted Ph. D., Date 1940, No. of pages in report 424

Granted by New York University, School of Education New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the curriculum, both graduate and undergraduate, in technical education in the nine colleges founded before the American Revolution. The forces that have played a part in the development of technical science in these colleges are described.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Smith (Last name), Irving (First name), G. (Middle name)

Exact Title INVOLVEMENT OF THE INDUSTRIAL ARTS TEACHER IN PLANNING INDUSTRIAL ARTS FACILITIES.

Degree granted Ed.D. Date 1969 No. of pages in report

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain functions ideally perfomed by secondary school industrial arts teachers in the planning of industrial arts facilities as perceived by superintendents, industrial arts teacher educators, and secondary school industrial arts teachers. A further purpose was to ascertain the opinions of architects concerning the involvement of industrial arts teachers in the planning of industrial arts facilities.

Source of Data and Method of Study:

Information forms were prepared and sent to superintendents, teacher educators, and industrial arts teachers to secure their opinions of the importance of industrial arts teachers in the planning of facilities. Frequencies, per cents, mean ratings, and rank orders of each function were reported. Personal interviews with architects secured their opinions of the preparation and value of industrial arts teachers in planning industrial arts facilities.

Findings and Conclusions:

1. All three educator groups indicated that it would be essential for industrial arts teachers to be involved in determining: (a) the educational objectives of the industrial arts department, (b) courses of industrial arts to be offered, (c) activities to be conducted in the industrial arts courses, (d) the approximate square feet needed in each instructional area, (e) the number, location, and type of electrical outlets needed for specified power equipment, and (f) the types of shops to be planned (general, comprehensive, or unit).
2. Professional preparation had little relationship to the opinions of teachers regarding the involvement of industrial arts teachers in planning.
3. Previous involvement of industrial arts teachers in planning had slight relationship to the opinions of superintendents concerning the involvement of industrial arts teachers in planning.
4. Architects indicated that: (a) the extent of involvement of industrial arts teachers in planning has been limited, (b) professional preparation of industrial arts teachers in planning for innovations has been inadequate, and (c) industrial arts teachers should review and evaluate the architect's preliminary plans.

796

RESOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Smith , James , Asbury
(Last name) (First name) (Middle name)

Exact Title Implications of Television for Industrial Arts.

Degree Granted Ed. D. Date 1957 No. pages in report 335

Granted By Wayne State University Detroit, Michigan
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To identify significant practices for a brochure of production practices and techniques for telecasting industrial arts activities, to report the scope of participation in telecasting industrial arts activities indicated by respondents in the study, and to review the educational television movement as revealed by pertinent literature.

Source of Data and Method of Research: An appraisal of the literature on educational television and persons who had participated in the production of television programs related to industrial arts. An inventory of 131 statements designed to reflect a favorable viewpoint with respect to individual production practices in telecasting industrial arts activities was submitted in a nationwide poll to 480 different persons who had been active in this field.

Selected practices were identified and resubmitted to participants, who were asked to describe effective techniques they had employed. The practices and techniques developed in this aspect of the study were submitted to 77 program directors of whom 51 responded with letters and editorial and critical suggestions.

Findings and Conclusions: Action of the Federal Communications Commission in 1952 in allocating 242 channels for educational purposes provided the first opportunity for portraying industrial arts activities for purposes of instruction and public understanding, since the inception of industrial arts as a phase of general education.

Television is an effective medium for presenting instruction and can be depended upon to maintain interest, create understanding, promote skills, insure learning and retention, and be generally acceptable to viewers.

A positive interest was manifest in the response of industrial arts teachers, supervisors, and others in related professions indicating their enthusiasm for the medium and their optimism for its future application in televising industrial arts instruction.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Smith, (Last name), Robert (First name), E. (Middle name)

Exact Title A STUDY OF THE HABITS ACQUIRED BY STUDENTS OF INDUSTRIAL ARTS IN MEASURING OR JUDGING.

Degree granted Doctors, Date 1928, No. of pages in report 185

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To study what are good or bad habits or practices used in measuring. To ascertain the distribution and frequency of good or bad habits, note the prevalence of bad habits among different levels of students.

Source of Data and Method of Study:

Two groups of junior high school students were given a measuring test and results were tabulated. They were then tested again after a remedial treatment.

Findings and Conclusions:

The students improved after the remedial treatment. There is much need for improvement in the methods of teaching industrial education. There should be more development of instruction sheets, information sheets, etc. There should be more objective means of evaluating projects. The fundamentals of Industrial Education are not now given the attention by teachers. The average student in the Junior High can use the common measuring instruments with a fair degree of accuracy. The students have acquired a number of bad habits when measuring which could be improved.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Snitz, , Ruben , Herman
(Last name) (First name) (Middle name)

Exact Title; AN ANALYSIS OF THE SHEET-METAL WORKER'S TRADE AND A CURRICULUM FOR THE TRAINING OF TEACHERS OF SHEET-METAL WORK IN INDUSTRIAL ARTS COURSES.

Degree granted Ph.D. , Date 1931 , No. of pages in report 251

Granted by Indiana University Urbana, Indiana
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The specific problem of this study is to make an analysis of the sheet-metal worker's trade which is to be used as the basis for a curriculum for the training of teachers of sheet-metal work.

Source of Data and Method of Study:

Findings and Conclusions:

799

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Snyder, Vance, Beidel
(Last name) (First name) (Middle name)

Exact Title USE OF TEACHER-PRODUCED INSTRUCTIONAL FILMS IN INDUSTRIAL ARTS
, EDUCATION.

Degree granted Ed. D., Date 1960, No. of pages in report

Granted by New York University New York City, New York
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine the effectiveness of teacher produced instructional films for use in industrial arts programs. The two treatments were an instructional film and a live demonstration of forty-three perceptual-motor tasks.

Source of Data and Method of Study:

A group of thirty-two students enrolled in a public school industrial arts program were randomly assigned to an experimental and ocntrol group and were equated for reading ability, mechanical ability and previous experience in industrial arts. The criterion was the quality of performing a perceptual-motor task as rated by a jury of industrial arts teachers.

Findings and Conclusions:

The findings of the study revealed that for thirty-two of the forty-three operations taught, no significant differences between the two methods of instruction were observed. In the remaining eleven tasks, the control group (live demonstration) was found to be superior to the experimental group. It was concluded that while both types of presentations have a definite place in classroom instruction, the influence of the personal contact between the teacher and the student during a live demonstration cannot be overlooked.

800

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE- AIAA - NAITTE

Author Sonderman, Robert, Boulware
(Last name) (First name) (Middle name)

Exact Title Origin, Development and Outcomes of Driver Education.

Degree Granted Ed. D. Date 1956 No. pages in report 135

Granted By University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To trace the origin and development of driver education in the public secondary schools of Missouri and to ascertain the outcomes of this program.

Source of Data: A study was made of all available material concerning the origin of driver education in Missouri, and an information form was prepared to collect data relative to the development and status of the program. Individual driving records and license test scores were examined to ascertain the outcomes of this program in Missouri.

Findings and Conclusions: The American Automobile Association was primarily responsible for the initiation of driver education in the State of Missouri, beginning in October 1940. School administrators list difficulty of class scheduling and cost as the two most pressing problems in administering a program of driver education. Driver education is a growing program, but the course content seems to be lacking in consumer information applying to automobiles, their services and supplies. Almost 100 percent of the schools grant credit toward graduation for driver education, but only 5 percent require the course for graduation. The findings of the study seem to indicate that students who have had the course in driver education do not appear to have any better driving record than those without the training. This study contradicts the findings of other studies, some of which concluded that driver education does reduce accidents by as much as 50 percent.

801

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Sorensen (Last name), Ronald (First name), Lee (Middle name)

Exact Title ELECTRICAL MANUFACTURING INDUSTRY: A RESOURCE STUDY WITH IMPLICATIONS FOR INDUSTRIAL ARTS CURRICULUM DEVELOPMENTS

Degree granted Ph. D., Date 1964, No. of pages in report 203

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the electrical manufacturing industry with implications for industrial arts curriculum development, as to the functions performed by this industry and how the sub-functions performed by this industry compare with industrial arts electrical subject matter topics.

Source of Data and Method of Study:

The universe was selected as the Standard Industrial Classification Division D Manufacturing, Industry Group 36, Electrical Machinery. To allow comparability of data, only firms or plants with 20 or more employees were included. A 10 percent proportional stratified sample was asked to participate, and 26 percent of the instruments were returned in time to be treated.

Findings and Conclusions:

A comparative analysis of the sub functions of the electrical industry with those included in state curriculum guides revealed that electrical instruction in industrial arts was concerned mostly with procedures and techniques that are related to many major tasks in Marketing, R & D, and a few tasks in Marketing, Production, Finance and Control, and Personnel Administration.

Two major implications were drawn from the findings of the study.
1. Identification of practical primary objectives for industrial arts is necessary. It is suggested that the primary objectives should be:
    (a.) To develop an understanding and appreciation of industry;
    (b.) To provide for guidance of pupils about industrial occupations for development of mature and understanding workers both operative and managerial;
    (c.) To enhance learning about industry through the development of basic manipulative ability.
2. Complete fulfillment of the general education mission of industrial arts requires the portrayal of the several activity areas of industry, such as Research and Development; Production, Marketing, Finance and Control, Personnel Administration; and Management.

802

SOURCE SHEET FOR SUMMARIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Soule , David , H.
(Last name) , (First name) (Middle name)

Exact Title THE ROLE OF THE DIRECTOR OF VOCATIONAL EDUCATION IN THE LOCAL SCHOOL DISTRICTS OF MICHIGAN

Degree granted Ed. D. Date 1966 No. of pages in Report 264

Granted by Wayne State University Detroit, Michigan
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To analyze the role of the local director of vocational education in Michigan by providing: (1) a better understanding of the role of the vocational director, and (2) a method of upgrading and making their services more effective.

Source of Data and Method of Study:

The responses of able, experienced directors of vocational education and of relatively inexperienced directors were obtained on an instrument developed to provide information on several relevant variables dealing with vocational education. Interviews were conducted to assess the reactions of the subjects to crucial situations.

Findings and Conclusions:

The role of the vocational director has shifted from areas of budget and supervision to coordination of educational plans. Techniques employed by directors for coping with crucial issues were basically concerned with cooperative participation and involvement procedures.

Significant differences were obtained between the responses of able, experienced directors and the responses of the inexperienced directors.

803

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Spaulding (Last name), Roland (First name), Harvey (Middle name)

Exact Title A CONTRIBUTION TO THE TECHNIQUE OF CURRICULUM MAKING FOR THE TRAINING OF PILOTS OF AIRPLANES.

Degree granted Ph. D., Date 1936, No. of pages in report 196

Granted by New York University School of Education (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The development of a course of study based on a survey of pilots and flight instructors. Piloting techniques, ground school subjects, and actual situations are included. (1904 to 1936).

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Speer (Last name), Hugh (First name), Wilson (Middle name)

Exact Title EVALUATION OF GENERAL EDUCATION IN INDUSTRY.

Degree granted Ph. D., Date 1950, No. of pages in report 175

Granted by University of Chicago (Name of institution) Chicago, Illinois (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a theory of general education in industry. To construct instruments to measure the educational outcomes of such a theory. To evaluate an experimental program of industrial education conducted under university guidance through the use of instruments based on this theory.

Source of data and method of study:

Four features of general education were developed and then adapted with necessary delimitation to the industrial situation. The 4 features are as follows: The commonality feature; the holistic feature; the generalization feature; and the functional feature. The evaluation was made at three levels: The theory level; the operational level; and the result level. At the result level, evidence was sought on desirable behavior changes in terms of understandings, skills and attitudes produced by the school experience. Evaluation of 6 broad objectives was made.

Findings and Conclusions:

The personnel have gained a deeper and broader sense of social responsibility, evidenced by a better understanding, greater concern and more constructive attitudes toward major social issues ranging from community to international problems. The personnel now employ better forms of written add oral expression and have established better communication within the company. The personnel have a better understanding of human relations. The personnel have a better understanding and appreciation of the company and better understanding of human behavior. The personnel have a betteriunderstanding and appreciationnof the company and better orientation in its relation to the socio-economic system. As a result of the school experience, the personnel have risen in the estimation of their co-workers.

805

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Spence, William, P.
(Last name) (First name) (Middle name)

Exact Title Job Planning in Shop Teaching: An Experimental Comparison ot Two Approaches.

Degree Granted Ed. D. Date 1957 No. pages in report 218

Granted By University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To compare two approaches to starting and teaching beginning shop classes in which the element of project planning was the experimental factor.

Source of Data and Method of Research: A comparison of four classes of seventh-grade general shop that were divided into two equated groups. One group participated in teacher-guided planning sessions; the other followed ready-made plans.

Findings and Conclusions: The two groups were about equally effective in skill development, in ability to analyze and plan procedures, in economy of use of materials, in number of errors in project construction, in teaching informational content, and in quality of work. The pupil-planned group had a significantly more favorable attitude toward the shop class and were significantly superior in ability to read working drawings. The teacher-planned approach is significantly superior in quantity of work performed. In the teacher's opinion the pupil-planned approach, in the long run, requires less teacher effort.

806

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Spencer (Last name), Albert (First name), Glenn (Middle name)

Exact Title CONTRIBUTION OF INDUSTRIAL ARTS TO THE UNDERSTANDING OF INDUSTRY POSSESSED BY SECONDARY SCHOOL STUDENTS.

Degree granted ______ Date ______ No. of pages in report ______

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the extent to which the objective, "understanding of industry," was being achieved in public secondary schools. Specifically, the study was designed to ascertain the relationship between: (1) the understanding of industry possessed by students with industrial arts experience and that of students without industrial arts experience; (2) the number of semesters of industrial arts completed and students' understanding of industry; (3) the technical area in which industrial arts courses were taken and students' understanding of industry; (4) the grade level at which industrial arts courses were taken and students' understanding of industry; and (5) students' understanding of industry and the importance attached to the objective "understanding of industry," by their industrial arts teachers.

Source of Data and Method of Study:

The study was conducted in eighteen public senior high schools in the state of Kentucky. In order to measure students' understanding of industry, a test was constructed, based upon the opinions of chairmen of college industrial education departments in the Mississippi Valley regarding the body of knowledge implied by the " understanding of industry" objective. The students' scores on the test were used to make comparisons between the various groups with respect to the understanding of industry possessed by each group.

Findings and Conclusions:

Students who had studied industrial arts scored significantly higher on the Industrial Understanding Test than students who had not studied industrial arts. A relatively large number of semesters on industrial arts experience (five or more) was required to enable students to gain a significantly greater degree of industrial understanding than students with less experience in industrial arts. Students whose industrial arts teachers ranked the "understanding of industry" objective higher in a list of eight objectives scored significantly higher on the test than students whose teachers ranked the objective lower. No difference was found between students with experience in general shop and students with experience in unit courses.

807

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Sredl, Henry, John
(Last name) (First name) (Middle name)

Exact Title A HISTORY OF INDUSTRIAL ARTS FROM 1920 to 1964.

Degree granted Ph. D. Date 1964 No. of pages in report 320

Granted by The Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The formulation of an objective record of growth and progress of industrial arts in the United States from 1920 to 1964. Identification of influential individuals, major trends, and movements in industrial arts during this period.

Source of Data and Method of Study:

The historical research was limited to a review of leading periodicals devoted to industrial arts, materials published by leading industrial arts organizations, and pertinent texts published during the period.

Findings and Conclusions:

Two philosophies seems to have emerged down through the years in the industrial arts profession.

1. The first of these attempts to emphasize the prevocational values of industrial arts, deriving its course content from an analysis of the trades.
2. The other force attempts to stress the place of industrial arts in the contemporary technological society and identifies it as the curriculum area which can most contribute to the understanding of today's world.

The former indulence seems to have permeated the educational institutions to a far greater degree than the latter philosophy.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Spinti, Robert, J.
(Last name) (First name) (Middle name)

Exact Title The Development of Trade and Industrial Education in Wisconsin.

Degree Granted Ed. D. Date No. pages in report

Granted By University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: The purpose of this study was to compile the history of trade and industrial education in Wisconsin into one organized treatise by tracing the developing of significant aspects of this phase of education from its origin until 1967.

Source of Data and Method of Research: Data were assembled from a variety of sources using the historical method of research.

Findings and Conclusions: The first trade school in Wisconsin was begun in Milwaukee in 1906 and taken over in 1907 by the Milwaukee Board of Education. A girls' trade school was begun in 1909 in Milwaukee.

A commission was appointed by the Wisconsin legislature to study the problem of educating out-of-school youth in 1909. As a result, all communities with a population in excess of 5,00 was to establish a board of industrial education to provide continuation, evening and adult schools. These local boards had the power to tax the community to support the schools established.

A state board of industrial education was established by the 1911 session of legislature to distribute state aid on a matching basis to local communities operating vocational education programs approved by the State Superintendent of Public Instruction. By 1912 most of the largest cities in Wisconsin had continuation schools in operation. Early teacher education was given through institutes where teachers exchanged ideas on materials to present their classes. Formal teacher education was centered at Stout Institute and Milwaukee Continuation School. In 1917 Wisconsin accepted the provisions of the Smith-Hughes Act.

The need for trade instruction in smaller cities led to the development of itinerant trade teachers. By 1930's there were four phases of trade and industrial education. In 1937 the vocational schools became schools of vocational and adult education.

During World War II many vocational schools were operating 24 hours a day seven days a week with an average of 8,000 people per month being trained for war production. Many veterans were trained in trade and industrial education with nearly 31,000 having completed or enrolled by end of June, 1948.

Increased educational opportunities for the hard-core unemployed and poor economic areas of Wisconsin were provided.

In 1963 the Wisconsin Board of Vocational and Adult Education became a member of the Coordinating Committee for Higher Education. In 1965 the newly named Board established eighteen geographic districts for vocational-technical schools. The State Board was authorized to grant associate degrees in 1961.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Spinti (Last name), Robert (First name), J. (Middle name)

Exact Title The Development of Trade and Industrial Education in Wisconsin.

Degree Granted Ed. D. Date No. pages in report

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: The purpose of this study was to compile the history of trade and industrial education in Wisconsin into one organized treatise by tracing the developing of significant aspects of this phase of education from its origin until 1967.

Source of Data and Method of Research: Data were assembled from a variety of sources using the historical method of research.

Findings and Conclusions: The first trade school in Wisconsin was begun in Milwaukee in 1906 and taken over in 1907 by the Milwaukee Board of Education. A girls' trade school was begun in 1909 in Milwaukee.

A commission was appointed by the Wisconsin legislature to study the problem of educating out-of-school youth in 1909. As a result, all communities with a population in excess of 5,00 was to establish a board of industrial education to provide continuation, evening and adult schools. These local boards had the power to tax the community to support the schools established.

A state board of industrial education was established by the 1911 session of legislature to distribute state aid on a matching basis to local communities operating vocational education programs approved by the State Superintendent of Public Instruction. By 1912 most of the largest cities in Wisconsin had continuation schools in operation. Early teacher education was given through institutes where teachers exchanged ideas on materials to present their classes. Formal teacher education was centered at Stout Institute and Milwaukee Continuation School. In 1917 Wisconsin accepted the provisions of the Smith-Hughes Act.

The need for trade instruction in smaller cities led to the development of itinerant trade teachers. By 1930's there were four phases of trade and industrial education. In 1937 the vocational schools became schools of vocational and adult education.

During World War II many vocational schools were operating 24 hours a day seven days a week with an average of 8,000 people per month being trained for war production. Many veterans were trained in trade and industrial education with nearly 31,000 having completed or enrolled by end of June, 1948.

Increased educational opportunities for the hard-core unemployed and poor economic areas of Wisconsin were provided.

In 1963 the Wisconsin Board of Vocational and Adult Education became a member of the Coordinating Committee for Higher Education. In 1965 the newly named Board established eighteen geographic districts for vocational-technical schools. The State Board was authorized to grant associate degrees in 1961.

810

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Stangl, Otto, A.
(Last name) (First name) (Middle name)

Exact Title THE DEVELOPMENT OF EVALUATIVE CRITERIA FOR SECONDARY INDUSTRIAL ARTS AND ITS APPLICATION TO SELECTED SCHOOLS.

Degree granted Ed.D. Date 1968 No. of pages in report 255

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To isolate criteria, standards for judging, and develop an instrument for evaluating secondary school industrial arts programs. Specifically, this study: (1) developed criteria for evaluating industrial arts in the public secondary schools, (2) tested those criteria for validity in the public secondary schools of New Mexico, and (3) verified the instrument's use by a trial test in selected secondary schools of Colorado.

Source of Data and Method of Study:

Curriculum physical facilities, and teacher preparation were the heading isolated from an investigation of related criteria and used for the main topics in the criteria for this research. Recommendations were found in the resources and organized as criterion statements under the foregoing headings. These statements were substantiated for inclusion in this instrument by authoritative sources. To validate the criteria a check list of statements, the criteria items, was rated by secondary school principals and industrial arts teachers in New Mexico. To verify the use of the instrument it was trial tested in selected secondary schools of Colorado. An information check list was developed from the criteria and sent to twenty schools having adequate and twenty schools having inadequate industrial arts programs. Adequate schools were expected to rate higher to verigy the evaluative validity of the criteria. Adequate schools did rank higher; the validity of the instrument was confirmed.

Findings and Conclusions:

It was apparent that some periodic means of examining secondary industrial arts was needed to inform teachers, administrators, and state educational officials of the inadequacies which may exist in their school's programs and the appropriate steps which might be required to eliminate such deficiencies. As a means of improving industrial arts programs in secondary schools, criteria for evaluating these programs have been used effectively; but little has been accomplished in the past few years towards improving such methods and devices. Criteria were developed for determining the adequacy of industrial arts programs for this research Since criteria were developed and validated in one state and this validity was confirmed in another, interested industrial arts groups could assume the initiative and determine if a nationwide criteria of this type if feasible for evaluating secondary industrial arts programs.

811

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Stanton (Last name), Mildred (First name), Bacon (Middle name)

Exact Title THE MECHANICAL ABILITY OF DEAF CHILDREN.

Degree granted Ph.D., Date 1938, No. of pages in report 65

Granted by Columbia University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The purpose of the study was to evaluate the mechanical ability of two groups of deaf children in order to provide wise educational guidance and effective curricula for deaf children. Each group consisted of 121 boys and 36 girls ranging in age from 12-0 to 14-11.

Source of Data and Method of Study:

Findings and Conclusions:

812

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Steeb (Last name), Ralph (First name), Victor (Middle name)

Exact Title The Supervision of Industrial Arts in Pennsylvania.

Degree Granted Ed. D. Date 1959 No. pages in report 244

Granted By University of Pittsburgh (Name of Institution) Pittsburgh, Pennsylvania (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To determine the status of supervision of industrial arts in the public schools of Pennsylvania and to ascertain and compute the opinions of secondary school principals and industrial arts personnel with respect to certain supervisory practices with types of supervisory organization.

Source of Data and Method of Research: A questionnaire sent to industrial arts teachers selected at random, principals of each of the teachers selected, and all vocational directors and industrial arts supervisors in the State of Pennsylvania.

Findings and Conclusions: Forty-six percent of the teachers report that local school administrators or curriculum coordinators are currently supervising industrial arts. The teachers judge the supervision of administrators and curriculum coordinators to have little value. The teachers consider the supervision of highest value to be that performed by special industrial arts supervisors, but the number of local programs supervised by these persons is small. Supervisory assistance by a county superintendent is limited to a few schools and is not rated highly. Fifty-four percent of the teachers report supervision by a State area coordinator of trade and industrial education, and only one-third of these teachers judge this supervision to have value.

The findings also report the extent of use and value of the following supervisory practices: classroom visits, intervisitation, teachers' meetings, individual conferences, demonstration teaching, bulletins and notices, professional study and activities, tests and measurements, lesson plans, shop planning and improvement, equipment and supply management, and audiovisual aids.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Stegeman (Last name), Arthur (First name), Lyle (Middle name)

Exact Title Training Needs of Technicians in Selected Lumber and Wood Products Industries of Humboldt County, California.

Degree Granted Ed. D. Date 1957 No. pages in report 139

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the training needs of technicians in selected lumber and wood products industries of Humboldt County, California.

Source of Data and Method of Research: Personal interviews with representatives of the 59 lumber and wood products industries which employed 25 or more men during normal production.

Findings and Conclusions: It was anticipated that by 1960 there would be 223 technicians employed. Only limited agreement was reached concerning the pre-employment training needed by the 20 types of technicians included. Mathematics, mechanics, physics, electricity, machine shop, electronics, drafting, and use of the slide rule were indicated as needed most often, in that order. Spelling, figuring, lack of speed and ingenuity, and inability to make practical applications were the greatest deficiencies reported. Most firms indicated a need for and offered training in safety facts and figures in their inservice training programs. Training in specialized skill in the use of tools and machines and company policies, rules, and regulations was offered about one-half as often as the need was indicated. Applied courses in mathematics, drawing, and electricity were quite frequently considered necessary but were seldom offered. Social skills and cooperation were not considered the responsibility of inservice training programs.

814

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Stegman (Last name), George (First name), K. (Middle name)

Exact Title PROPOSED AIMS FOR GRAPHICS IN ENGINEERING AS THEY COULD CONTRIBUTE TO COLLEGIATE ENGINEERING EDUCATION.

Degree granted Ed. D. Date 1962 No. of pages in report 394

Granted by Wayne State University (Name of institution) Detroit, Michigan (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

All education, regardless of scope, must be prepared in response to the following questions: 1. What is it that must be taught? 2. How will we know when it has been successfully taught? 3. What teaching techniques and devices must be used?

Source of Data and Method of Study:

To attempt to answer the above questions, research was conducted on the proposed aims for engineering graphics as they related to the educational aims. 495 forms with the proposed aims were sent to various engineering personnel. 60.8% of the forms were returned.

Results of the survey were tabulated and placed into graphic form.

Findings and Conclusions:

An educational aim, or objective, is an intent, which communicates a proposed change, which the educator wishes to see take place in the student. The change should be both in behavior, i.e., development of a skill, knowledge, appreciation, sensitivity, etc., and content, i.e., subject matter. An aim, therefore, can be considered as a segment of the educator's philosophy presented in a functional, operational form which gives direction to a course, or considered on a larger scale, to a curriculum, or curricula. There are innumerable changes which take place in students as a result of learning experiences in one particular course. It is of primary importance that those major aims possible of attainment be identified.

Aims are necessary to guide a course in a specific direction, and to select appropriate teaching-learning materials, instructional methods, and evaluation techniques. Educators will continue to flounder until they know exactly what their students should be able to do at the end of the instructional program.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Stephens (Last name), Robert (First name), Lee (Middle name)

Exact Title MAJOR HOUSEHOLD APPLIANCE SERVICE TECHNICIAN TRAINING NEEDS OF IOWA

Degree granted Ph.D. Date 1969 No. of pages in report

Granted by Iowa State University (Name of institution) Ames, Iowa (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To present information relative to the number of major household appliance service technicians in communities of over 2,500 population in the state of Iowa. Included in this information are the number of job vacanices, replacement needs, number of firms employing appliance service technicians, ages of technicians, wages paid to technicians, and projected employment needs throught 1971.

Source of Data and Method of Study:

The data are presented by the sizes of the employing firms and by the Iowa merged areas. The curricular data are presented by the type of appliance reported to be the appliance most often serviced by the reporting firm.

Findings and Conclusions:

1. The increase in the numbers of appliance service technicians for the year 1967-68 was computed to be 6.8 percent.
2. The median age of Iowa's appliance service technicians was computed to be in the upper 30's.
3. The median wage paid to appliance service technicians was determined to be above the average national wage paid to appliance service technicians in 1965.
4. The majority of the appliance service technicians had attended manufacturer's training schools, but nearly a fourth of the technicians had no training other than experience or on-the-job training.
5. The employers indicated that over half of the technicians would benefit from part-time programs in the trade, designed to up-grade their skills.
6. The general categories of curricular material receiving the highest ratings by employers in indicating the importance of these items to technicians were: business practices, theory and structure of appliance mechanisms, and the theory and operation of appliance controls.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Stephenson (Last name), Leslie (First name), Earle (Middle name)

Exact Title Superior Practices in the Administration of Industrial Arts Teacher Education.

Degree Granted Ph. D. Date 1958 No. pages in report 335

Granted By The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain any central tendency toward a consistent type of view-point among administrators in the field of industrial arts education. To develop a valid list of practices to serve as an administrative guide in the development of programs of industrial arts teacher education. To study those administrative practices considered to be superior, in order that they might be of value in strengthening the administrative efforts of industrial arts teacher education departments in the United States.

Source of Data and Method of Research: Critical statements pertaining to internal administration found in the literature of higher education were examined, and a list of administrative practices was developed. This list was revised and sent to leaders in the field of education for validation.

Findings and Conclusions: Seventeen recommendations are listed that pertain mainly to colleges and universities in California.

817

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Stern, Jacob,
(Last name) (First name) (Middle name)

Exact Title THE FUNCTIONS OF GOODS-PRODUCING INDUSTRIAL ESTABLISHMENTS: A VALIDATION OF SELECTED ELEMENTS IN A DEFINITION OF INDUSTRY AS A FRAMEWORK FOR CURRICULUM IN INDUSTRIAL EDUCATION

Degree granted Ph. D. Date 1964 No. of pages in report 282

Granted by Wayne State University Detroit, Michigan
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a framework for industrial education based on the activities of industrial establishment. The following functions were used: (1) Fundamental and Applied Research (2) Product Development (3) Planning for Production (4) Manufacturing a) custom manufacturing, b) continuous manufacturing

Source of Data and Method of Study:

Three sources of data were used: (1) Industrial education textbooks (2) Consultant opinions in the field of professional management (3) Management personnel from various establishments. An opinionnaire was developed and sent to 54 consulting institutions - 35.4% responded. A textbook survey form went to 184 schools - 66% responded. 36% response came from management personnel.

Findings and Conclusions:

1. All three areas were in agreement with the proposed functions of industry as a framework for understanding goods-producing industrial establishments. Numerous changes were suggested for some of the specific functions.
2. Emphasis was given to human factors, manpower, and the social sciences.
3. Product development should emphasize consumer needs over profits.
4. Basis types of manufacturing should be distinguished in the description given them.

Suggestions and comments were evaluated and many were incorporated into a set of "functions" and descriptions. These were then offered as a basis for curriculum construction in the area of industrial education.

818

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA- NAITTE

Author Stevenson, James, E.
(Last name) (First name) (Middle name)

Exact Title SHOP MANAGEMENT IN INDUSTRIAL ARTS TEACHER PREPARATION.

Degree granted Ed.D., Date 1953, No. of pages in report 184

Granted by Stanford University Palo Alto, California
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To analyze shop management into its component parts, and to examine their importance in shop teaching; to examine the program of teacher training in industrial arts at San Jose State College to discover the extent to which elements of shop management are dealt with in this program to examine competency of students and graduates of this program; to ascertain effectiveness of the program in this area; and, to discover weaknesses in the program and make recommendations for its improvement.

Source of data and method of study:

Data were obtained from 22 senior students in industrial arts, 67 student teachers,128 graduates who had taught from one-half to 5 years, and staff members of the Industrial Arts Department, San Jose State College. Tests were administered to seniors and student teachers. A rating scale was used to rate performance of student teachers and graduates on the job.

Findings and Conclusions:

The Industrial Arts Department of San Jose State College should clarify differences between expendable supplies, hand tools, and fixed shop equipment; stress the importance of shop cleanliness and orderliness to shop teaching; give greater attention to maintenance and repair of equipment, operation of shop tool cribs, shop safety programs, method of handling supplies and materials, and the preparation of annual shop orders for tools and materials; include more adequate coverage of procedures for shop budgeting and bookkeeping systems; and provide teacher candidates with ample samples of graded shop projects, require student teachers to design and produce various teaching aids during student teaching periods, and require student teachers to assume responsibility for attractive appearance of shop in which student teaching is done.

819

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Stombaugh (Last name), Ray (First name), Merton (Middle name)

Exact Title A SURVEY OF THE MOVEMENTS CULMINATING IN INDUSTRIAL ARTS EDUCATION IN SECONDARY SCHOOLS.

Degree granted Ph. D., Date 1936, No. of pages in report 192

Granted by Columbia University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Traces the influence in industrial arts education from 1871 to 1936, identifying certain major movements in industrial arts education and considering various designs and expedients which teachers have found useful. Public and private manual training schools and the development of industrial arts teaching methods and devices are considered.

Source of data and method of study:

Findings and Conclusions:

820

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Stoner, William, D.
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL ARTS TEACHER EDUCATION IN OHIO

Degree granted Ph. D., Date 1940, No. of pages in report 164

Granted by Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To project a state undergraduate program for the preparation and certification of Industrial Arts teachers for the secondary schools of Ohio.

Source of data and method of study:

The data were collected through a formal questionnaire survey and inspection tours while the author was state inspector of industrial arts teacher educators in Ohio. The data used to identify and develop a philosohpy of industrial arts in general education were based upon official state and federal publication and writings of nationally recognized leaders.

Findings and Conclusions:

There was a lack of any underlying philosophy of Industrial Arts education. No recruiting or student selection program was reported. The scheduled teaching load was extremely heavy. The development of manipulative skills and the accumulation of technical knowledge, as an end in itself, were apparent in far too many technical courses. Physical facilities for the industrial arts teacher education programs were not considered adequate by the inspection committee, in any school in the state. Recommended: (1) Recruiting of promising high school pupils (2) Institute more professional and methods courses, (3) A wider variety of technical courses. (4) A broader academic base is needed, (5) More emphasis on student interpreting program (student teaching), (6) The facilities should be upgraded.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Stoughton (Last name), Robert (First name), W. (Middle name)

Exact Title DIFFERENTIAL PREDICTIVE VALUES OF THE DIFFERENTIAL APTITUDE TESTS IN THE CONNECTICUT TECHNICAL SCHOOLS.

Degree granted Ph.D., Date 1955, No. of pages in report 221

Granted by University of Connecticut (Name of institution) Storrs, Connecticut (City, State)

Where Available: Micorfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To investigate the extent to which the Differential Aptitude Tests may be useful in the differential prediction and direct prediction of success in Connecticut technical schools.

Source of Data and Method of Study:

Data were secured by administering the Differential Aptitude Tests to 729 ninth grade boys in five shop areas in ten Connecticut technical schools, instructors ratings of student ability, tendency of students to persist in school, and mean scores of students in each of the five trade groups who completed the eleventh grade.

Findings and Conclusions:

The Verbal Reasoning and Numerical Ability tests tend to have a relatively high relation to success in all general education and most of the shop courses studied. The Clerical Speed and Accuracy and the Language Usage tests yielded the lowest validity coefficients. The Abstract Reasoning, Space Relations, and Mechanical Reasoning tests are more useful for predicting shop success than for predicting general education success. The data suggest that these three tests can be used with caution for differentail prediction; that the differences in abilities required for success in the five shops studied are such that the trades should not be grouped as one occupational family; and that there are differences in the relation between abilities as measured by the DAT and success in shop at the grade-nine and grade-eleven levels.

822

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Strandberg (Last name), C. (First name), E. (Middle name)

Exact Title A COMPARISON OF SELECTED INDUSTRIAL PRINTING PRACTICES WITH THOSE TAUGHT IN HIGH SCHOOL VOCATIONAL PRINTING CLASSES.

Degree granted Ed. D., Date 1963, No. of pages in report

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the practices and equipment used in the printing industry and the attitude of the printing industry towards secondary school vocational instruction.

Source of Data and Method of Study:

A survey was conducted of (a) 293 commericial printing plants located in forty-five states and (b) 148 federally reimbursed secondary vocational printing programs. Descriptive data about policy and practices of both schools and commercial plants was used to access the adequacy of school programs in light of industrial requirements.

Findings and Conclusions:

The findings suggested that while many of the basic principles of printing and the graphics arts industry are taught in secondary schools, the vocational programs did not include instruction on certain types of specialized equipment or specialized processes. In most instances, schools emphasized many of the more common "hand-machine" operations, while industry tends to deal more with "automated" processes.

823

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Streichler, Jerry,
(Last name) (First name) (Middle name)

Exact Title THE CONSULTANT INDUSTRIAL DESIGNER IN AMERICAN INDUSTRY FROM 1927 TO 1960.

Degree granted Ph. D., Date 1963, No. of pages in report

Granted by New York University New York City, New York
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To trace the history of the American Industrial Design movement from 1927 to 1960 with emphasis on the role of the consultant industrial designer in American industry.

Source of Data and Method of Study:

The historical methodology, using both primary and secondary sources of data, was employed for the conduct of this study. Data were extracted from books, periodicals, catalogs and were topically and chronologically presented in an historical narrative.

Findings and Conclusions:

The findings suggest that the current role of the consultant industrial design service has evolved and been influenced by many factors since the 1920's. Where once the designers were primarily engineers, stage designers, interior decorators, rapidly changing technology, concomitant with economic and social transformation, has changed the considerations and competencies of industrial designers. Current emphasis on research in consumer purchasing habits, competitive manufacturing procedures, appearance and obsolesecence of products are of major concern to contemporary designers. The trend in industrial design is towards technical and functional advances rather than superficial appearance changes in product designs.

824

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Strickland, Thomas, Whitney
(Last name) (First name) (Middle name)

Exact Title Implications of Selected Behavioral Science Data for Industrial Arts Education

Degree granted Ed. D., Date 1959, No. pages in report 258

Granted by University of Maryland College Park, Maryland.
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To present principles derived from behavioral science data in forms applicable to the major elements of industrial arts instruction and to evaluate professional literature intended for pre-service and in-service teachers using the principles derived from the behavioral sciences.

Source of data and method of study: A review of basic professional literature was conducted and categorized. The behavioral science data was syntehsized in terms of principles from which generalizations were derived and applied to two widely used professional texts and to two state-level curriculum guides in industrial arts.

Findings and Conclusions: The professional literature acknowledges the importance of maturational factors in learning but curriculum and instruction guides suggest uniformity in learning experiences. An adult orientation and structuring of learning goals and objectives prevail.

Construction activity as problem solving, the relationship of ideas to techniques, and complexities involved in learning how to plan received little attention. The professional literature examined seemed to miss the principles associated with evaluation.

In substance, the professional literature examined presents an empirical approach to instruction. Behavioral science data are present primarily by inference.

825

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Strickland, Thomas, Whitney
(Last name) (First name) (Middle name)

Exact Title Implications of Selected Behavioral Science Data for Industrial Arts Education

Degree granted Ed. D., Date 1959, No. pages in report 258

Granted by University of Maryland College Park, Maryland.
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To present principles derived from behavioral science data in forms applicable to the major elements of industrial arts instruction and to evaluate professional literature intended for pre-service and in-service teachers using the principles derived from the behavioral sciences.

Source of data and method of study: A review of basic professional literature was conducted and categorized. The behavioral science data was syntehsized in terms of principles from which generalizations were derived and applied to two widely used professional texts and to two state-level curriculum guides in industrial arts.

Findings and Conclusions: The professional literature acknowledges the importance of maturational factors in learning but curriculum and instruction guides suggest uniformity in learning experiences. An adult orientation and structuring of learning goals and objectives prevail.

Construction activity as problem solving, the relationship of ideas to techniques, and complexities involved in learning how to plan received little attention. The professional literature examined seemed to miss the principles associated with evaluation.

In substance, the professional literature examined presents an empirical approach to instruction. Behavioral science data are present primarily by inference.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Strong (Last name), Merle (First name), Edward (Middle name)

Exact Title An Investigation of Trade and Industrial Education Curriculum Materials Development and Curriculum Laboratories in the United States.

Degree Granted Ph. D. Date 1958 No. pages in report 228

Granted By The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To investigate the need for a national plan of cooperation and coordination for trade and industrial education curriculum development and to secure information on the organization and operation of presently established curriculum laboratories.

Source of Data and Method of Research: Questionnaires to trade and industrial education State supervisors and curriculum materials specialists in the various States. Additional information was gathered through personal interviews and correspondence with leaders in trade and industrial education.

Findings and Conclusions: The development of sound curriculum materials for trade and industrial education continues to be an area of great need. Only nine States have a person with a major responsibility in this area; these States produce most of the materials. It appears that a greater number of instructional materials could be secured for the same expenditure and funds if duplication among the various States could be reduced and if a national plan for cooperation and coordination existed.

827

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Struck (Last name), John (First name), W. (Middle name)

Exact Title A Survey of Industrial Education Needs of Baghdad, Iraq, and Its Service Area.

Degree Granted Ed. D. Date 1956 No. pages in report 244

Granted By The Pennsylvania State University, (Name of Institution) University Park, Penn. (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To determine the size and scope of a new vocational trade school to be built by the Iraqi government in the capital city of Baghdad, Iraq.

Source of Data and Method of Research: A detailed personal-enumeration survey of every single industrial establishment involved in the manufacture or repair of goods or products in Baghdad and its suburbs.

Findings and Conclusions: In the area covered by this study there were 4,573 different firms employing 33,367 industrial workers. There are large numbers of small firms, with only 41 firms employing over 100 persons. The area is growing industrially very fast, and the demand and need for skilled and semi-skilled workers is great. The present Baghdad school is quite ineffectual in meeting the needs. The government should expand its present trade training facilities both quantitatively and qualitatively in many areas. There is a pressing need for competently trained vocational teachers, administrators, and supervisors. It would be practically impossible for a new school to exceed the needs for competent skilled workers for many years to come. Recommendations resulting from this study include specific suggestions for meeting this large demand for skilled workers and recommendations for setting up the new school.

828

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Stuart, , Harland ,
(Last name) (First name) (Middle name)

Exact Title THE IMPROVEMENT OF VOCATIONAL EDUCATION IN THE PHILIPPINE ISLANDS

Degree granted Doctors , Date 1933 , No. of pages in report

Granted by Harvard University Cambridge, Massachusetts
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Stuart, Irving, R.
(Last name) (First name) (Middle name)

Exact Title A STUDY OF FACTORS ASSOCIATED WITH INTER-GROUP CONFLICT IN THE LADIES GARMENT INDUSTRY IN NEW YORK CITY.

Degree granted Ph. D., Date 1951, No. of pages in report 218

Granted by New York University Washington Square, New York
(Name of institution) (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the nature and extent of the relationship, if any, between inter-group economic competition and racial and nationality discrimination in the ladies garment industry in New York City.

Source of data and method of study:

The experiences of white foreign born immigrants were compared with those of colored migrants and immigrants. Data were drawn from surveys conducted by government and private sources concerned with the problem as well as interviews with workers and officials of the largest labor union in the industry. In addition, access to verbatim stenographic reports of the Grievance Board of the Union was also permitted and used as illustrations of grievances.

Findings and Conclusions:

Prejudice and discrimination toward racial and nationality minority groups are most often based upon the economics of the relationship between the groups. Acceptance of minority group workers by employers, and the consequent acceptance by the workers themselves, is conditioned by the docility of the newcomer. The position of the Negro in this industry is uncertain because Negroes do not regard this type of work as being on a social level which they consider to be desirable and at the same time this industry is one of the few which places them on an equal level with Whites. Grievances between union members on ethnic lines are rare.

830

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Stuessy (Last name), Eugene (First name), L. (Middle name)

Exact Title AN EXPERIMENT TO EVALUATE THE RELATIVE EFFECTIVENESS OF TWO APPROACHES TO TEACHING COLLEGE ALGEBRA IN ACHIEVING SELECTED OBJECTIVES OF COLLEGE ALGEBRA IN INDUSTRIAL TECHNOLOGY CURRICULA.

Degree granted ______ Date May, 1969 No. of pages in report ______

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To evaluate the relative effectiveness of two approaches to teaching college algebra in achieving those objectives of college algebra in industrial technology curricula which can be pursued in a college algebra course for general education.

Source of Data and Method of Study:

The one semester experiment was designed to test the null hypothesis of no significant difference in the effectiveness of the two teaching approaches. The experiment involved the comparison of the traditional approach to teaching college algebra and an experimental approach which placed increased emphasis on applications of mathematics to motivate students to higher levels of interest and understanding.

The following measurements were used to evaluate the relative effectiveness of the teaching approaches:

1. Student achievement on a series of examinations and assigned problems during the experiment.
2. Student attitudes and comments, both written and oral.

Findings and Conclusions:

1. The traditional approach was more effective in the development of student abilities with proofs.
2. The experimental approach was more effective in the development of student abiliti with derivations.
3. The two approaches appeared to be essentially equivalent in developing student understanding and skill in algebra.

831

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Sutton, Fred, Crawford
(Last name) (First name) (Middle name)

Exact Title FACTORS AFFECTING THE RETENTION OF PART-TIME BUSINESS AND INDUSTRIAL TEACHERS IN COMMUNITY COLLEGES--HENRY FORD COMMUNITY COLLEGE, A CASE STUDY

Degree granted Ed. D. Date 1961 No. of pages in report 302

Granted by Wayne State University Detroit, Michigan
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This study was selected to identify the factors of retention and their relative importance to a group of part-time instructors in an evening program of the Management Department, Henry Ford Community College, Dearborn, Michigan.

Source of Data and Method of Study:

Data were collected by means of a survey inventory containing (10 objective items asking for the instructor' personal and professional background thought to be pertinent to teacher retention, and (2) subjective items asking for the instructors' opinions and attitudes on their reasons for wanting to teach and/or terminate their teaching assigrments, as well as their likes and dislikes in this teaching situation; and a series of interviews.

Findings and Conclusions:

The methodology consisted of the following steps: First the population was divided into two general categories; instructors who had taught four or more semesters were relegated to a "high retention" group, and those who had taught one or two semesters and had since terminated their services were placed in a "low-retention" group. The two groups were then asked to respond to the survey inventory. The responses of the two groups were contrasted statistically by the "t-ration" method to determine whether there were any strong differences between them. Those items which were significant at the .05 level or less were selected as indicating retention factors.

As a verification and explanation of those items developing statistical significance at the .05 level or less, nondirective interviews were performed with a random sample of the gigh-retention and low-retention teachers who completed the inventory. These interviews yielded verbal explanations of their likes and dislikes and reasons for their desire to teach and to terminate the teaching situation. The teachers' opinions were rated numerically and compared statistically by the "t-ration" method, as were the inventory results. Also, the interview produced many verbal comments and an explanation of the statistically significant inventory items.

Twenty-five major findings of the study related to the retention of business and industrial teachers were tabulated in the dissertation.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Swaengsugdi (Last name), Thanoo (First name), (Middle name)

Exact Title A Study of the Educational Programs of Thai Students in the United States Under the Sponsorship of the International Cooperation Administration During the 1958-1959 Academic Year.

Degree Granted Ed. D. Date 1959 No. pages in report 259

Granted By Wayne State University (Name of Institution) Detroit, Michigan (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To investigate social and cultural experiences of participants; ascertain attitudes of participants toward their educational programs; evaluate certain educational experiences; identify opinions of participants regarding potential applications of educational experiences; and study specific problems encountered by the participants.

Source of Data and Method of Research: Data were obtained from 190 completed survey instruments that were originally sent to 204 persons under the direct sponsorship of the International Cooperation Administration on five university contracts: two at Indiana University and one each at Oregon State College, The University of Texas, and Wayne State University.

Findings and Conclusions: The average participant has been, at least once, a guest in an American home, a visitor in a church, and a speaker before American groups on Thailand and its culture. A considerable number of participants belonged to professional organizations, but only a few were active in social groups. They have visited an average of 10 States each, more frequently in the eastern part of the United States.

Participants reported that they were satisfied with their educational programs. To a considerable degree they felt that their educational experiences could be applied to situations in Thailand. Application would be concerned with improving work situations, teaching at the college level, improving administration and doing research. They believed that experiences in the United States would help them qualify for promotion and enjoy social distinction.

Participants recognized that they had difficulties with their studies because of inadequate competency in English. This was especially true during the early phase of their experiences in the United States. There was a minor problem in adjusting to living conditions, such as food and climate, but they did not regard this as serious. Eventually, most became well adjusted to living conditions in the United States.

833

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Taggart (Last name), Leo (First name), R. (Middle name)

Exact Title PRINCIPLES AND PRACTICES IN THE USE OF PRODUCTIVE WORK IN THE PUBLIC VOCATIONAL SCHOOLS.

Degree granted Ed. D., Date 1953, No. of pages in report 185

Granted by University of Pittsburgh (Name of institution) Pittsburgh, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a list of guiding principles and practices in the use of productive work in the public vocational schools.

Source of data and method of study:

Data were obtained by a check list consisting of 222 principles and submitted to 13 state officials, 84 administrators and 222 shop instructors in the Commonwealth of Pennsylvania.

Findings and Conclusions:

Findings resulted in 114 guiding principles which received acceptance. The extent of practice was determined. The principles were ranked within the general classifications of Administration and Supervision, Curriculum, and Finance.

834

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Talkington (Last name), Joe (First name), Ed (Middle name)

Exact Title AN ANALYSIS OF INDUSTRIAL ARTS OBJECTIVES AS DETERMINED BY Q-TECHNIQUE.

Degree granted Ed.D. Date 1962 No. of pages in report 212

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To compare the Q-Sort responses of the industrial arts teachers in the public schools of Colorado with the Q-Sort responses of the thirty-five selected prominent persons in industrial arts to determine whether there was unity of direction as to the priority of industrial arts objectives on a state and on a national level.

Source of Data and Method of Study:

The Q-Sort instrument used in this study consisted of fifty-four behavioral statements which were representative of nine industrial arts objectives. The participants were asked to sort the cards into an order of importance in describing the desired behavioral change for a "typical" industrial arts student.

Findings and Conclusions:

1. A unity of direction for industrial arts objectives was not found on a state and on a national level.
2. The ranking of objectives by the six categories of the Colorado industrial arts teachers revealed that there was unity of agreement only at the first and the last priority.
3. The results of this research indicated that the study of objectives by ranking behavioral statements was a valid approach to the problem and that Q-Technique made discriminations necessary for such rankings.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE -- AIAA - NAITTE

Author Tate, Harold, S.
(Last name) (First name) (Middle name)

Exact Title Analysis and Evaluation of the Job of the State Supervisor of Trade and Industrial Education.

Degree Granted Ed. D. Date 1951 No. pages in report 324

Granted By The Pennsylvania State University University Park, Penn.
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To analyze and evaluate the job of the State supervisor of trade and industrial education in 51 States, territories, and districts.

Source of Data and Method of Research: The procedures used were a study of literature for writings from historical, philosophical, or operational viewpoints; an examination of research in industrial education or related fields; an examination of State plans and digests of narrative reports; interviews with State supervisors, State directors, teacher trainers, city directors and other leaders in the field; checksheet returns from State directors, State supervisors, teacher trainers, city directors, and a jury. Evaluative criteria are based on jury replies.

Findings and Conclusions: The author recommends that State supervisors compare their responses with those of their coworkers, prepare a master list of responsibilities for those to whom it might be of value, and examine other responses to see what help is expected from them; that State directors inform State supervisors as to what is expected; that there be more conferences between State supervisors and State directors, teacher trainers, and city directors; that the composite list of duties be used by teacher trainers in their courses; that State supervisors reconsider their responsibility toward industrial arts supervision; that the master's degree be required nonretroactively for State supervisors; that more local and State initiative be used in the preparation of State plans.

836

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Teel, Dean, Allan
(Last name) (First name) (Middle name)

Exact Title A COMPARISON OF METHODS UTILIZING THE CONTRACT APPROACH IN TEACHING BEGINNING ELECTRICITY-ELECTRONICS FUNDAMENTALS TO COLLEGE STUDENTS.

Degree granted Ed. D., Date 1967, No. of pages in report ______

Granted by Texas A&M University College, Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to compare the achievement in electricity-electronics fundamentals that can be attained by a contact approach with that of the traditional approach in teaching method.

Source of Data and Method of Study:

Four randomly selected groups of students enrolled in an electronics course for each of two semesters were designated as experimental and control groups. Control groups received the traditional lecture-discussion from textbooks and selected laboratory activities while the experimental group received a treatment consisting of the scientific approach to problem solving. Both groups received pre and post tests.

Findings and Conclusions:

The findings of the study revealed that the problem solving method of instruction was not as effective as the traditional method of instruction as measured by achievement test scores. Based on the opinion of students, the conclusions were made that while the problem solving method was both interesting and challenging, they felt that it was more applicable to advanced electronic courses. They also felt that the students receiving the traditional method learned more of the basic concepts of electricity than they had been able to learn by the problem solving method.

937

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Thatcher, Glenn, Michael
(Last name) (First name) (Middle name)

Exact Title THE ANALYSIS OF THE EFFECT OF VIDEO TAPE RECORDINGS FOR SUBSTITUTE TEACHING.

Degree granted Doctors, Date June, 1970, No. of pages in report 131

Granted by Southern Illinois University Carbondale, Illinois
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to evaluate the effectiveness of video tape recordings as an aid in substitute teaching situations.

Source of Data and Method of Study:

The source of data were 353 eighth grade students enrolled in mechanical drawing classes of seven Junior High Schools of the Pincellas County Florida, Public School system. Experimental and control groups were pre and post tested. The experimental groups were subjected to a treatment consisting of a video taped presentation which introduced the orthographic projection concept. The main change scores for the various groups were subjected to the F test.

Findings and Conclusions:

There was no significant difference between groups exposed to an area substitute and out of the area substitute teacher aided by the video tape recording which introduced the orthographic projection concept. There was a significant differenc between the previously stated groups and the group exposed to an out of the area substitute not aided by the video tape recording.

The results of the analysis of the data suggest that substitute teaching situations in eighth grade mechanical drqwing can be educationally more productive through the use of video tape recordings.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Thiel, Donald, William
(Last name) (First name) (Middle name)

Exact Title Industrial Arts in Occupational Therapy: A Study and Projection of Its Relationship to the Activities of Prescribed Treatment in Physical and Mental Disabilities.

Degree granted Ph. D., Date 1959 No. of pages in report

Granted by The Ohio State University Columbus, Ohio.
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E. R. I. C. ( )

Purpose of Study: To ascertain the contributions that industrial arts education can bring to the occupational therapy profession. To provide a professional instrument which might induce better public relations within the two professions concerned, and to establish a basis of understanding by revealing essential, and common facts as regards the mutual concerns of occupational therapy and industrial arts education.

Source of data and method of study: The study evolved from (1) a review of current and past literature of occupational therapy and industrial arts education, (2) a curricula survey of twenty-seven schools in the United States approved to offer occupational therapy, (3) a questionnaire survey of 324 registered occupational therapists practicing in the field.

Findings and Conclusions: Registered occupational therapists from all parts of the nation concluded that industrial arts education type activities are essential to their program, and further that industrial arts education personnel should be teaching these activities to occupational therapy students.

The activities deemed essential and representative of those utilized in occupational therapy programs were: (1) ceramics, (2) drawing and design, (3) fundamentals of electricity, (4) graphic arts, (5) industrial conceptions, (6) jewelry and lapidary, (7) leatherwork, (8) metal work, (9) plastics, (10) upholstery and furniture refinishing, and (11) woodworking.

One hundred per cent of the therapists responding had received experience as undergraduates in four or more of the eleven mentioned activity areas.

839

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA ACIATE - NAITTE

Author Thieme (Last name), Eberhard (First name), (Middle name)

Exact Title PUPIL ACHIEVEMENT AND RETENTION IN SELECTED AREA OF GRADE FIVE USING ELEMENTARY INDUSTRIAL ARTS ACTIVITIES INTEGRATED WITH CLASSROOM UNITS OF WORK.

Degree granted Ed. D. ,Date 1965 No. of pages in report 164

Granted by The Pennsylvania State University (Name of institution) University Park, Pennsylvania (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To evaluate elementary industrial arts activities when integrated with classroom units of instruction in selected area of work in the fifth grade.

Source of Data and Method of Study:

Ninety-four fifth grade teachers in Rochester, New York, were asked to indicate the content area that they found most difficult to teach and the specific areas of study that their pupils found especially difficult to comprehend. Pupils were given pre-and post-tests in work study skills, map reading, interpretation, and comprehension.

Findings and Conclusions:

Pupils utilizing three-dimensional elementary industrial arts construction activities integrated with their units of study did as well as those pupils taught by traditional methods in the areas tested. No significant differences, however, were found in construction activity and traditional classes in the areas of work study skills, map reading, general map knowledge, and specific map knowledge.

Re-testing of pupils after the summer vacation indicated no significant difference in their retention in the areas tested between the activity pupils and the traditional pupils.

It was found that the best way to identify classroom teachers who used three-dimensional construction activities as a method of teaching was by observation and visual survey.

There were some significant differences of opinion between classroom teachers and elementary industrial arts teachers on the utilization of construction activities. Classroom teachers felt that scheduled industrial arts classes are more important than construction activities in the classroom. Classroom teachers also felt that adequate storage facilities were necessary before construction activities could be utilized. Hammering and sawing activities were not to be encouraged in the classroom, according to the teachers.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Thomas (Last name), Alvin (First name), Ignace (Middle name)

Exact Title Industrial Education in the Land-Grant Colleges.

Degree Granted Ph. D., Date 1957 No. pages in report 303

Granted By The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To trace the origin and development of the land-grant college movement and indicate the place of industrial education in this movement. To identify the spirit and intent of the Land-Grant College Acts of 1862 and 1890. To identify the contemporary patterns of industrial education in the land-grant colleges and universities and establish a basis for projecting industrial education in these colleges and universities in the years ahead. To illustrate a projection of an industrial education program in a land-grant college using the suggested criteria.

Source of Data and Method of Research: Historical methods were used in tracing the land-grant college movement. A survey determined contemporary patterns of industrial education in the land-grant colleges and universities. Philosophical methods were used in constructing the criteria for projecting industrial education in the land-grant colleges and universities. These were validated by leaders in the field. A survey was made of a land-grant college, and the criteria derived were used for recommendations.

Findings and Conclusions: Land-grant institutions were founded to include practical education in the mechanical arts. Lack of industrialization in the Nation and leadership in the profession contributed to the failure of industrial education to develop a major part of the land-grant colleges. Contemporary technology has created an abundance of jobs requiring post-high school education not requiring a degree, and industrial education on the higher levels should provide this right now. Professional leadership and additional research is needed to overcome the obstacle of positions taken by land-grant colleges.

841

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Thomas (Last name), Charles (First name), Lewellyn (Middle name)

Exact Title THE RELATIONSHIP OF COMPETENCE OF INDUSTRIAL ARTS STUDENT TEACHERS TO DOGMATISM AS REVEALED BY THE ROKEACH DOGMATISM SCALE.

Degree granted Ed.D. Date 1964 No. of pages in report 84

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To lift the question of relationship between dogmatism (as characterized by open or closed-mindedness) and industrial arts student teacher competence from a purely speculative level, to a level of consideration supported by evidence. Specifically, the study was directed toward the question of whether the open mind is an asset, of questionable value, or not significant to the competence of industrial arts student teachers.

Source of Data and Method of Study:

Industrial arts student teaching supervisors from seven teacher education institutions across the continental United States were asked to administer the Rokeach Dogmatism Scale to their student teachers for whom they were also asked to indicate an evaluation of competence. Population for study consisted of 168 industrial arts student teachers who had completed the entire student teaching sequence, and eleven student teaching supervisors. Dogmatism scores were obtained from supervisors as well as student teachers, and chi-square computed to test significance of relationships at the .05 per cent level of probability.

Findings and Conclusions:

1. There is no significant difference between scores made on the Rokeach Dogmatism Scale by industrial arts student teachers, and competence of these same student teachers as rated by their supervisors.
2. Industrial arts student teachers rated high in competence by their supervisors, do not have low scores on the Rokeach Dogmatism Scale.
3. Industrial arts student teachers rated low in competence by supervisors, do not have high scores on the Rokeach Dogmatism Scale.
4. There is no significant difference between dogmatism Scale scores of selected industrial arts student teaching supervisors and the Rokeach Dogmatism Scale scores of those student teachers whom they have supervised and evaluated.
5. Supervisors with high scores on the Rokeach Dogmatism Scale do not tend to give higher competence ratings to student teachers with high scores on the Rokeach Dogmatism Scale.
6. There is some tendency for supervisors with low scores on the Rokeach Dogmatism Scale to give lower competence ratings to student teachers who also have low Rokeach Dogmatism Scale scores.

842

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Thomas (Last name), Joseph (First name), Kovac (Middle name)

Exact Title Use and Effectiveness of Public Relations Practices in the Interpretation of Industrial Arts in Selected Secondary Schools of California.

Degree Granted Ed. D. Date 1957 No. pages in report 183

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the use and effectiveness of public relation practices by teachers who actively interpreted their industrial arts program as compared with teachers who did less interpretation in selected secondary schools of California.

Source of Data and Method of Research: Two information forms, one returned by 132 industrial art teachers and the other returned by 440 parents of boys, from a random sample.

Findings and Conclusions: Teachers who actively interpreted industrial arts are more likely to be active in school and professional activities, are more likely to receive extra pay and free periods for departmental duties, reported using practically all of the public relations practices, and gave higher values of effectiveness for nearly all practices. Teachers believe that industrial art teachers should be expected to publicize their programs, that their public relations program should be expanded, and that teachers have a tendency to overrate the effectiveness of their program. Parents appeared to be satisfied with the industrial arts curriculum, were more aware of the vocational aspects of industrial arts, and indicated electricity as a course they would advise their children to take.

843

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Thomas (Last name), Maurice (First name), Grover (Middle name)

Exact Title INDUSTRIAL ARTS ACTIVITY IN THE DEVELOPMENT OF MANIPULATIVE ABILITY

Degree granted D. Ed., Date 1968, No. of pages in report

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine whether industrial arts activities are a significant factor in developing the manipulative abilities of high school students.

Source of Data and Method of Study:

A population of one hundred and sixty (160) senior high school boys enrolled in wood and metalworking courses were stratified and tested according to past experience with industrial arts. Groups of students with no industrial arts experience were compared to other groups of students who had various amounts of industrial arts experience in terms of performance on several tests of manipulative ability.

Findings and Conclusions:

The findings supported the conclusion that there is a positive relationship between the amount of industrial arts experience of a senior high school boy has had and his subsequent performance on a test of manipulative ability. It was further suggested that industrial arts programs are instrumental for enhancing the manipulative abilities of high school students.

844

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Thompson, Robert, Long,
(Last name) (First name) (Middle name)

Exact Title RELATED INFORMATION FOR THE COMPREHENSIVE GENERAL SHOP IN A FUNCTIONAL JUNIOR HIGH SCHOOL INDUSTRIAL ARTS PROGRAM IN NEW YORK STATE.

Degree granted Ed. D., Date 1947, No. of pages in report 872

Granted by New York University, School of Education New York, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An analysis of the supplementary courses offered in industrial arts programs. A brief history and explanation of the objectives, principles, and practices are given to acquaint the reader with the need of such related material.

Source of data and method of study:

Findings and Conclusions:

845

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Thorp (Last name), John (First name), Henry (Middle name)

Exact Title A HANDBOOK IN INDUSTRIAL ARTS FOR CONNECTICUT SECONDARY SCHOOLS.

Degree granted Ed. D., Date 1945, No. of pages in report 330

Granted by New York University School of Education (Name of institution) Washington Square, N.Y. (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the philosophies, problems, and conditions of the industrial arts program in Connecticut. A standardized curriculum which offers some flexibility is set up.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Thrower, Robert, Granville
(Last name) (First name) (Middle name)

Exact Title THE STATUS AND ADEQUACY OF INDUSTRIAL ARTS PROGRAMS IN THE PUBLIC SECONDARY SCHOOLS OF NORTH CAROLINA.

Degree granted Ph. D., Date 1961 No. of pages in report 233

Granted by The Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a set of evaluative criteria appropriate for determining an adequate program of industrial arts; to survey the present programs to determine the status of industrial arts in the public secondary schools of North Carolina. To compare the status with the evaluative criteria, and to define the measures or steps needed for a more adequate program.

Source of Data and Method of Study:

A proposed set of criteria was sent to a jury of industrial arts leaders from all parts of the United States for rating on a five point scale. Data used in the determination of status were obtained from the records of the State Department of Public Instruction and from a questionnaire submitted to the 254 industrial arts teachers in the state.

Findings and Conclusions:

1. 23.9 percent of the public secondary schools offered industrial arts, and over 96 percent of these schools had either one or two teacher departments.
2. Most of the classes were general shop oriented, with the most frequent areas being woods, drafting, and metals. Over-all the curriculum was very narrow in scope.
3. More than 95 percent of the teachers held at least a baccalaureate degree, with greatest depth of preparation in the areas of woods, drafting, and metals.
4. Facilities were found to be generally adequate with the exception of auxiliary spaces.
5. Over 90 percent of teachers stated that a state supervisor of industrial arts was needed.
6. The secondary schools need to provide greater breadth and depth of industrial arts curriculums, open more courses to girls, require at least one year of industrial arts at the junior high level, make greater use of community and regional resources, standardize objectives, increase emphasis on related information studies, and intensify in-service educational activities.

847

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Tierney, (Last name), William (First name), Francis (Middle name)

Exact Title EDUCATION FOR INDUSTRY: A COLLEGE LEVEL PROGRAM EMPHASIZING TECHNICAL AND PRE-SUPERVISION PREPARATION FOR MANUFACTURING AND SELECTED SERVICE INDUSTRIES.

Degree granted Ed.D., Date 1952, No. of pages in report 183

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To obtain information essential to the development of a college level program intended to prepare persons for management positions of the semi-professional or junior executive type and to ascertain the reaction of Maryland industrialists to the program.

Source of Data and Method of Study:

Data were obtained from survey forms sent to industrialists in Maryland, from an examination of comparable programs operating in other institutions, and from and examination of data pertaining to inplant training programs of selected industries.

Findings and Conclusions:

There is a definite need in Maryland for a four year college level program for the preparation of semi-professional and technical personnel. The supervision of production workers involves greater responsibility in industry today than formerly, and hence a broader type of preparation is needed. The technical and personal qualifications expected in new employees at the semi-professional or technical level imply the need for a diversified program which cuts across several educational fields. Maryland industries are willing to provide temporary employment for student trainees in positions of educational value. Employment outlook for graduates is good. Prospects of graduates advancing to positions of greater responsibility in a period of four or five years are promising. The University of Maryland, by utilizing exising facilities, can provide a valuable service to students and to the manufacturing and service industries of the state.

848

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Tilley, , Truman , E.
(Last name) (First name) (Middle name)

Exact Title SYNTHESIS OF ACADEMIC WORK AND INDUSTRIAL EDUCATION AS A MEANS OF IMPROVING GENERAL EDUCATION.

Degree granted Doctors , Date 1945 , No. of pages in report ______

Granted by Northwestern University Evanston, Illinois
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

849

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Torbett, Daniel, L.
(Last name) (First name) (Middle name)

Exact Title AN ANALYSIS OF GENERAL DRAFTING INSTRUCTION IN MISSOURI SECONDARY SCHOOLS WITH IMPLICATIONS FOR ADVANCED PLACEMENT IN COLLEGE LEVEL DRAFTING PROGRAMS

Degree granted Ed. D., Date 1965, No. of pages in report ________

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine factors which contribute to the effectiveness of the secondary school general drafting program which would have implications for the advanced placement programs in college level drafting.

Source of Data and Method of Study:

Data were obtained from 100 Missouri high schools. Selected educators from each engineering and state college were requested to provide recommendations concerning content. Standardized drafting tests were given to 1,524 students and their drafting instructors were asked to complete questionnaires concerning content, ability level, instructional techniques and background.

Findings and Conclusions:

1. There is a common body of content for general drafting courses in Missouri.
2. High general ability drafting students have comparable knowledge with college students who have completed basic drafting courses.
3. Most drafting teachers devote the majority of their time to subjects other than drafting.
4. Students from smaller schools are less likely to gain college drafting credit.

850

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Torres (Last name), Leonard (First name), (Middle name)

Exact Title A STUDY OF THE RELATIONSHIP BETWEEN SELECTED VARIABLES AND THE ACHIEVEMENT OF INDUSTRIAL ARTS STUDENTS AT LONG BEACH STATE COLLEGE.

Degree granted Ed.D., Date 1963, No. of pages in report 87

Granted by Colorado State College (Name of institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To determine the relationship that existed between the intellective variables and the first, as well as the third, semester achievement of industrial arts students at Long Beach State College in the industrial arts, the general, and the total academic program. This study, also, determined the extent to which the intellective variables could be employed to predict achievement.

Source of Data and Method of Study:

The sample group consisted of 200 male students who had enrolled in the industrial arts program between the fall terms of 1957-1960.

The criteria used in this study were the student grade point averages which were computed at the end of a student's first and third semesters of full time study.

Findings and Conclusions:

There was a significant relationship between the junior college grade point average and the first as well as the third semester grade point average in the industrial arts, the general, and the total program.

Each regression equation had a large standard error of estimate, and, consequently, an accurate prediction of the dependent variable cannot be made from known values of the prediction variables.

851

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Towers (Last name), Edward (First name), Roy (Middle name)

Exact Title An Evaluation and Projection of the Undergraduate Program of The Ohio State University.

Degree Granted Ph. D. Date 1956 No. pages in report 278

Granted By The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To evaluate and project the undergraduate industrial arts teacher education program at The Ohio State University.

Source of Data and Method of Research: A documentary survey to trace the evolution of the practical arts and the founding of The Ohio State University; a survey to find the characteristics and purposes of industrial arts on the elementary and secondary levels of Ohio schools; an evaluative criterion to evaluate the undergraduate program; interviews, correspondence, and available literature.

Findings and Conclusions: The purposes of the program should be re-examined and brought up to date. A new physical facility should be planned immediately A technical curriculum to reflect technology should be implemented during the first 2 years of the undergraduate program. The specialized professional education program should be revised and broadened to provide a wide variety of experiences of different levels. A continuous program of evaluation should be developed. Syllabuses and course outlines should be developed for the courses in the transitional curriculum.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Trapanese, Menna, Gerard
(Last name) (First name) (Middle name)

Exact Title A STUDY OF FACILITIES FOR THE CRAFTS PROGRAMS CONDUCTED IN SELECTED ELEMENTARY SCHOOLS IN THE STATE OF NEW JERSEY.

Degree granted Ed. D., Date 1964 No. of pages in report 187

Granted by New York University New York City, New York
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to access the facilities for conducting crafts programs in selected elementary schools in the State of New Jersey.

Source of Data and Method of Study:

Both primary and secondary sources of information were used to obtain data in an attempt to (a) assess crafts facilities, (b) recommend different programs and activities for crafts courses, (c) design more appropriate laboratories for crafts programs, and (d) establish an organizational and administrative guide for crafts programs.

Findings and Conclusions:

The study revealed that (a) too few specialists are currently employed in elementary school, (b) facilities are inadequate to meet the instructional needs and (c) funds for elementary crafts programs have not kept pace with the cost of materials. Recommendations were made for improving the effectiveness of the crafts programs by (1) the development of more appropriate activities for crafts programs, (2) the establishment of more efficient organizational and administrative procedures, and (3) the evolvement of a consistent philosohpy and purpose of instruction in elementary school crafts programs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Trautwein (Last name), Calvin (First name), Leroy (Middle name)

Exact Title AN EXPERIMENTAL COMPARISON OF THREE METHODS USED TO IDENTIFY INDUSTRIAL MATERIALS.

Degree granted Ed. D., Date 1962, No. of pages in report 96

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To measure the effectiveness of the traditional method, which makes use of the five human senses, with two other methods: (1) the "museum," using the sense of sight alone; and (2) the "stereo," a three-dimensional color transparency viewing system, also making use of sight only, but used in combination with the photographic representation rather than the real material.

Source of Data and Method:

Three hundred participants, equally distributed in four colleges supplied the necessary data by taking the same three method tests, but in varying orders or sequences as determined by random selection. Since the study's sole concern was with testing identification ability, each participant was checked only on those materials he felt that he knew and so stated on a check sheet. The scores secured represented individual ability to identify by each of the three methods. Under those conditions the statistical analysis which resulted presented a comparison of the effectiveness of methods tested.

Findings and Conclusions:

All methods tested differ significantly, and thus the hypothesis of equal value must be rejected. Rank of the means shows that the traditional method is superior, the museum method is somewhat below the first method reported, and the three dimensional method (stereo) is considerably inferior. Based upon these findings it must be assumed that under normal conditions the traditional method of testing material identification, despite the added administrative demands as compared with the other methods, is superior to those tested and its use is thereby recommended.

854

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Tregilgus (Last name), Earl (First name), Perrin (Middle name)

Exact Title A SURVEY AND EVALUATION OF THE EMPLOYEE TRAINING PROGRAMS IN THE LAUNDRY AND DRY CLEANING INDUSTRIES IN INDIANA.

Degree granted Ed. D., Date 1954, No. of pages in report 268

Granted by Indiana University (Name of institution) Bloomington, Indiana (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the training practices and procedures of the laundry and dry cleaning industries in Indiana and to evaluate the effectiveness of the training programs in operation.

Source of data and method of study:

Data were secured by questionnaire, personal interviews, and an evaluation check list.

Findings and Conclusions:

Most employees receive some training for the job they are to do. In most cases the plant owner is responsible for employee training. Most training is to the "tell 'em and show 'em" type. Little use is made of the services of vocational school personnel in the training of employees. The labor turnover rate is high. Most of the objectives of the training programs are usually achieved, although with varying degrees of success. The training programs seem to meet the present needs of the industries, are worth their cost of operation, need to be modified to meet changing conditions, but could not be discontinued or shortened without ill effects.

855

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDSUTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Triche, Jr. (Last name), Andrew (First name), (Middle name)

Exact Title VOCATIONAL EDUCATION: A COMPARATIVE STUDY OF VOCATIONAL EDUCATION IN THE FORTY-EIGHT STATES.

Degree granted Ph.D., Date 1933, No. of pages in report 72

Granted by Pennsylvania State College (Name of institution) State College, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study of the conditions existing in the United States during 1931 regarding the efforts of states in assisting in vocational education and the results of these efforts. States are compared as they support agriculture, trade and industrial, and home economics education.

Source of Data and Method of Study:

Findings and Conclusions:

856

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Tsuji, Thomas, T.
(Last name) (First name) (Middle name)

Exact Title EDUCATIONAL VIEWPOINTS: A STUDY OF THE OCCUPATIONAL IDEOLOGY OF INDUSTRIAL ARTS TEACHING AS RELATED TO STUDENTS IN TRAINING.

Degree granted Ph. D., Date 1967, No. of pages in report _____

Granted by Michigan State University East Lansing, Michigan
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To test the hypotheses of enrollment in an industrial arts curriculum by students involves the assimilation of educational viewpoints advocated by the members of that occupational group.

Source of Data and Method of Study:

The definitions of philosophies, essentialism and progressivism, as defined by Robert Swanson were used as the basis of the study. A third viewpoint was described for the exploratory phase of the investigation. Instruments from which information was gathered were: (1) The Inventory of Educational Viewpoints by Swanson and (2) the Educational Viewpoints Inventory developed by the investigator. A group of students majoring in industrial arts from a college in New York State was selected as the sample.

Findings and Conclusions:

1. Senior students enrolled in industrial arts programs tend to manifest behavior more in keeping with the viewpoint of industrial arts teacher educators than do freshmen and new transfers.
2. There is a tendency for students scoring in the extreme ends of the Swanson Inventory to be (1) generalists at the progressive end of the continuum and (2) specialists at the less progressive end of the continuum.
3. Students who have memberships in two professional industrial arts clubs tend to be proportionately more progressive than nonmembers.
4. All factors of membership-nonmembership in associations of the nonvocational subculture were not differentiated by viewpoints.
5. From the prededing statement it is claimed that the instruments employed in this particular investigation did measure occupational ideology and that the instruments were not able to differentiate students on factors which were categorized nonvocational.
6. It was found that senior nontransfer students were more progressive than senior transfer, other transfer, and other nontransfer students groups.
7. Senior transfer students were proportionately more progressive than other other transfer and other nontransfer groups.

857

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Tucker, Casey, A.
(Last name) (First name) (Middle name)

Exact Title CREATIVITY AND ITS RELATIONSHIP TO SUCCESS IN COLLEGE AS MEASURED BY THE GRADE POINT AVERAGE.

Degree granted Ed.D., Date 1965, No. of pages in report 76

Granted by Colorado State College Greeley, Colorado
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. To determine whether there was any significant difference in the number of creative and non-creative people enrolled in the various curriculums.
2. To determine whether there was any significant difference in success as measured by the grade point average, achieved by the most creative and least creative individuals.
3. To determine whether the most creative individuals would respond to questions on the personal data sheet in a manner that would be significantly different from the responses given by the neutral and least creative group.

Source of Data and Method of Study:

The instruments used were the A.C. Test of Creative Ability and the Form VII Minnesota Test of Creative Thinking. The grade point average was based on a 4.0 possible. The main group being studied was composed of randomly selected students from five teacher education curriculums. The test instrument was administered to the randomly selected group, and each person was categorized as highly creative, neutral, or least creative. A chi square test of significance was performed on each of the questions on the personal data sheet to determine whether the responses given by those categorized as most creative could be said to be significantly different from those responses given by persons categorized as neutral and creative least.

Findings and Conclusions:

1. The validity of the Form VII Minnesota Test of Creative Thinking was found to be .7753 and was accepted as exceeding the minimum requirements of this research.
2. The reliability coefficients of both parts of the instrument were found to be .9665 and .7804. Both figures exceeded the minimum requirements of this research.
3. The analysis of variance formula applied to figures yielded by the test instrument indicated that no significant difference could be detected in the mean achievement scores of the various groups.
4. No significant relationship between the grade point average and the mean achievement scores on the creativity test was detected.

858

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Turner, Bridges, Alfred
(Last name) (First name) (Middle name)

Exact Title OBJECTIVES AND PROBLEMS OF INDUSTRIAL EDUCATION IN NEGRO COLLEGES.

Degree granted Ed.D., Date 1941, No. of pages in report 138

Granted by Pennsylvania State College State College, Pennsylvania
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A study of the existing regulations, the objectives, descriptions, teachers, and students in the Negro colleges of the seventeen states in which separate schools are maintained. A plan to improve industrial education programs in Negro schools is suggested.

Source of data and method of study:

Findings and Conclusions:

859

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Turner (Last name), Erwin (First name), (Middle name)

Exact Title A Survey of Employer Opinion of the Adequacy of Trade and Industrial Training in Selected Schools of South Dakota.

Degree Granted Ed. D. Date 1958 No. pages in report 222

Granted By Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the satisfaction or dissatisfaction of employers with the graduates of federally reimbursed trade and industrial education courses of selected schools of South Dakota by obtaining their opinions concerning specific items connected with the performance of employees.

Source of Data and Method of Research: Personal interviews from 11 schools out of 16 offering federally reimbursed courses and from interviews of the first employer of each graduate of the program.

Findings and Conclusions: Employers rated the success of the graduates of trade courses as better than that of beginning workers normally employed as to skill, related information, general education, and personality. The more successful the graduate, the more training he took after completing his trade course.

More of the graduates whose success was rated equal to that of the top 5 percent of beginning workers normally employed took post-employment training than did those rated equal to the lowest 25 percent. Skill and personality are about equally important, with a margin in favor of skill. The relative importance of skill and personality varies with the individual trades.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Turner, Robert, E.
(Last name) (First name) (Middle name)

Exact Title Duties and Requirements of Personnel Who Work with Electronic Devices in Manufacturing Industries.

Degree Granted Ed. D. Date 1957 No. pages in report 173

Granted By University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To obtain information relative to the duties, opportunities and requirements of persons who work with electronic devices in manufacturing industries in the St. Louis metropolitan area.

Source of Data and Method of Research: The Missouri Division of Employment Security; Chamber of Commerce of Metropolitan St. Louis; inquiries sent to manufacturing firms; telephone conversations with various plant personnel; interviews with persons familiar with the duties, opportunities, and requirements of personnel who work with electronic devices; and literature pertinent to the study. The study included 396 manufacturing firms, each of which employed 100 or more people.

Findings and Conclusions: The principal duties associated with electronics consist of: diagnosing trouble, adjusting, servicing, assembling, making repairs, installing, and maintaining equipment. If anticipated demands are met, these workers will increase by approximately 50 percent within the next 3 years. There appears to be a reasonable number of opportunities for individuals, both white and nonwhite, well trained in this type of work. The opportunities for women are limited. Greatest opportunities are found in firms employing 500 or more engaged in manufacture of ordnance and accessories; chemical and allied products; petroleum and coal products; electrical machinery, equipment, and supplies; and transportation equipment. Persons whose chief work is with electronics need to possess knowledge of the following: basic electrical and electronic circuits, high-voltage power supplies, power supply regulation, control circuit oscillators, voltage discrimination, modulation and demodulation, impedance and network matching, triggering circuits, wide band amplifiers, linear and log amplifiers, and multiplication and function generation.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Underhill, Charles, M.
(Last name) (First name) (Middle name)

Exact Title THE STATUS OF AND NEED FOR INDUSTRIAL ARTS INSTRUCTION IN SEVENTH-DAY ADVENTIST SECONDARY SCHOOLS.

Degree granted Ed. D. Date 1968, No. of pages in report

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To study Seventh Day Adventist high schools in terms of (a) the students of industrial art programs (b) attitudes of staff towards industrial arts instruction (c) interest of industrial arts students and (d) projected frowth of industrial arts programs.

Source of Data and Method of Study:

The population consisted of sixty-three Seventh Day Adventist secondary schools throughout the United States. Both interview and mail techniques were used to obtain the necessary data about schools, students and staff. Data were analyzed by analyses variance technique.

Findings and Conclusions:

The findings of the study indicate that (a) the attitudes of Seventh Day Adventist educators were favorable to industrial arts, (b) the number and quality of industrial arts programs was increasing (c) boys enrolled in the industrial arts program had an "average" interest in the program (d) the location of the school and the attitudes and interest of staff is related to the quality of the industrial arts program.

It was, therefore, concluded that (a) an expansion of industrial arts programs was warranted and should be supported, (b) additional studies need to be conducted to continually access and improve the quality of industrial arts programs in the schools.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Urgell, Francisco, C.
(Last name) (First name) (Middle name)

Exact Title THE DEVELOPMENT AND CONTEMPORARY PROBLEMS OF VOCATIONAL EDUCATION IN PUERTO RICO.

Degree granted Ph. D., Date 1941, No. of pages in report 292

Granted by Pennsylvania State College State College, Pennsylvania
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Traces the development of education in agriculture, home making, industry, vocational rehabilitation, distributive education, and guidance from the American occupation, 1898 to 1941. The schools, teacher preparation, and curricula are considered.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Usdane (Last name), William (First name), Miller (Middle name)

Exact Title A COMPARATIVE STUDY OF VOCATIONAL REHABILITATION LEGISLATION FOR THE SEVERELY HANDICAPPED ORTHOPEDIC CIVILIAN IN GREAT BRITAIN AND THE UNITED STATES.

Degree granted Ph.D., Date 1955, No. of pages in report 436

Granted by New York University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To present, analyze, compare, and evaluate legislation pertaining to the vocational rehabilitation of the severely handicapped orthopedic civilian and to propose recommendations for the development of effective legislation to provide comprehensive vocational rehabilitation services.

Source of Data and Method of Study:

The major hypothesis of the study was tested by the application of the criteria established from the writings of five national and international figures in the field of rehabilitation to the current legislation of Great Britain and the United States in this respect. Questionnaires were sent to the 48 States and the District of Columbia and to the Ministry of Labor and National Service and of Health in Great Britain.

Findings and Conclusions:

There is a considerable difference between the number of severely handicapped orthopedic civilians in Great Britain and the United States and the legislation which provides assistance for them. A more positive role is assigned to the central government in Great Britain where civilians and servicemen are treated by the same legislation. In the United States legislation for each is separate. In Great Britain the government has established sheltered shops for the severely handicapped while the United States through legislation has done little due to a lack of proper facilities. Voluntary agencies in the United States work more with these handicapped civilians than do the government agencies while the opposite is true in Great Britain.

864

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Vacek (Last name), William (First name), L. (Middle name)

Exact Title PERSONALITY VARIABLES OF MALE COLLEGE FRESHMEN WITH EMPHASIS ON INDUSTRIAL ARTS.

Degree granted Ed.D. Date 1962 No. of pages in report 180

Granted by Colorado State College (Name of Institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To ascertain whether or not, on the basis of certain personality variables measured by the mean scores on the scales of the Edwards Personal Preference Schedule, differentiation could be made between the following groups: each of eight freshmen major groups and the Edwards normative group of college men; the freshmen industrial arts major group and each of the other seven freshmen major groups, the freshmen industrial arts major group of this study and the group of senior industrial arts majors used in Crist's study; and, the freshmen industrial arts major group of this study and each of the groups of industrial arts teachers used in Morgan's and Monroe's studies.

Source of Data and Method of Study:

The population of this study was limited to male freshmen college students who had signified one of the following eight major fields of educational preparation: business education; health and physical education; humanities education; industrial arts education; mathematics education; music education; science education; and, social studies education. The Edwards Personal Preference Schedule was administered to each freshmen in each of the eight groups.

Findings and Conclusions:

1. The Edwards Personal Preference Schedule does differentiate between each of the eight freshmen major field groups used in this study and the Edwards normative group of college men.
2. The Edwards Personal Preference Schedule does differentiate between the freshmen industrial arts education majors and five of the other seven freshmen major field groups: business, humanities, music, science, and social studies.
3. The Edwards Personal Preference Schedule does not differentiate between the freshmen industrial arts majors and two of the other seven freshmen major field groups: health and physical education and mathematics.
4. The schedule does differentiate between the freshmen industrial arts majors of this study and the senior industrial arts majors used in Crist's study.
5. The schedule does differentiate between the freshmen industrial arts majors of this study and the industrial arts teachers used in Morgan's study.
6. The schedule does differentiate between the freshmen industrial arts majors of this study and the industrial arts teachers used in Monroe's study.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Van Derslice (Last name), John (First name), Frederick (Middle name)

Exact Title THE EDUCATIONAL, SOCIAL, AND ECONOMIC BACKGROUND OF ENGINEERING AND TECHNICAL STUDENTS ANALYZED FOR THE PURPOSE OF ESTABLISHING PROFILES FOR USE IN COUNSELING.

Degree granted Ed. D., Date 1967, No. of pages in report 181

Granted by Utah State University (Name of Institution) Logan, Utah (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine if there were identifiable factors in the education, social, and economic backgrounds of the successful students of the engineering and technician programs at a comprehensive community college.

Source of Data and Method of Study:

The factors were available from the normal transcript records and entrance data accumulated for each student. The educational social, and economic background was identified by using twenty three descriptive factors. Each of the factors was analyzed for its descriptive and inferential significance.

Findings and Conclusions:

Each of the factors was statistically treated in order to determine if it was significantly different at the five percent level for the following group comparisons: a) engineering students and technician students, b) successful engineering and unsuccessful engineering students, c) unsuccessful engineering and successful technician students, d) successful technician and unsuccessful technician students. None of the twenty three factors which described the social or economic background of the sample were significantly different in any of the four group comparisons. In all cases those factors which were determined to be significant were cognitive in nature. Only one factor was significant for the successful and unsuccessful technician group. It was the high school grade point average. For the other group comparisons, the scores achieved on the SCAT-V, SCAT-Q, SCAT-T, Cooperative English Tests (Total Reading Comprehension and Total English, high school grade point average, high school mathematics and science achievements, and the parental educational level were determined to be significantly different. A cross validation check utilizing a similar sample displayed a low validity when the characteristic profiles were used as a predictive device.

866

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Van Dusen (Last name), Edward (First name), B. (Middle name)

Exact Title APPRENTICESHIP IN WESTERN NEW YORK STATE--A STUDY OF THE DEVELOPMENT AND PRESENT STATUS OF APPRENTICE TRAINING PROGRAMS, AND OF INDENTURED APPRENTICES.

Degree granted Ph.D., Date 1948, No. of pages in report 464

Granted by Cornell University (Name of institution) Ithaca, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study of apprentices and apprenticeship in western New York State, examining the historical background of apprenticeship, and the apprentices themselves. Much current information relative to the status of apprenticeship in the area studied is given in the summary of the data collected from the apprentices by questionnaire.

Source of Data and Method of Study:

1. Historical background material by research of published and unpublished material.
2. Questionnaires answered by 1,270 indentured apprentices in Western New York State.
3. Literature and personal contact data from Federal and State apprentice training officials and groups, and the Veternans Administration.

Findings and Conclusions:

1. Special opportunities and aid for veterans resulted in unprecedented growth in apprenticeship programs.
2. Temporary nature of Veterans Aid bring to administrators a complex problem and heavy responsibility.
3. Apprenticeship offers opportunities for further training and education for persons with wide range of background.
4. Apprentices have had more schooling of less than college level than has the general population of New York State.
5. Trade school attendance may prove an asset to apprentices who follow the trade studied, but little evidence was found indicating apprentices received credit toward completion of indentures by such attendance.
6. For half of the apprentices, no delay between leaving full-time school and their first job.
7. The majority of apprentices have had some work experience prior to apprenticeship.
8. Few entered apprenticehsip under 18 although the law permits entry at 16.
9. The common length for apprenticeship was four year.
10. Friends and relatives were the great4st influence in choice of trade as opposed to guidance counseling.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author VanTassel (Last name), Raymond (First name), (Middle name)

Exact Title TOOLS FOR THE GENERAL SHOP: A BACKGROUND STORY OF THE ORIGIN AND DEVELOPMENT OF THE HAND TOOLS USED IN THE INDUSTRIAL ARTS COMPREHENSIVE GENERAL SHOP IN THE JUNIOR HIGH SCHOOL.

Degree granted Ed. D., Date 1948, No. of pages in report 457

Granted by New York University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a series of instruction sheets giving a short descriptive account of each tool with illustrations which will present to junior high school pupils, in an interesting manner, a background story of the origin and development of the hand tools commonly used in industrial arts comprehensive general shops in New York State.

Source of data and method of study:

Uses a jury of specialists, and the questionnaire method in selecting the most used tools in the various areas of the comprehensive general shop and investigates their origin, historical associations and development. Uses the historical and descriptive method in writing short accounts of the development of each tool selected. The descriptions are written in a vocabulary suited to 7th, 8th, and 9th grade pupils. A total of 32 questionnaires were mailed to a group of selected teachers. Replies were received from 23 persons.

Findings and Conclusions:

Results indicated that seventy tools were of suffieient significance to warrant write-ups as instructional information sheets. The interpretations were in the form of brief vignettes understandable to pupils of junior high school ages. The investigator recommended that the teacher should attempt to develop an industrial arts program that will be integrated with such school subjects as social studies, science, and the language arts, utilizing the descriptive accounts of hand tools. It is his belief that an outcome of a knowledge of our heritage in tools is a better understanding of those societies that had a part in the invention and development of tools, and that knowledge may provide a better appreciation of tools. Many communities have been founded by the establishment of a tool manufacturing plant within the community. In such communities, pupils should be encouraged to study the far-reaching effects of new improvements of tools on the social and economic life of their community.

868

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Van Oot (Last name), Benjamin (First name), Henry (Middle name)

Exact Title THE OPTIMUM QUALIFICATIONS FOR APPRENTICESHIP IN CERTAIN ALLIED TRADES.

Degree granted Ph.D., Date 1932, No. of pages in report 38

Granted by Columbia University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A description of an educational and training program, based on data compiled over a three year period, in an effort to discover the factors which contribute to success in apprenticeship in the shipbuilding industry.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Vandeberg, (Last name), Loyd (First name), Wallace (Middle name)

Exact Title EDUCATIONAL NEEDS OF PROSPECTIVE HOME OWNERS CONCERNING THE ACQUISITION AND OWNERSHIP OF A HOUSE.

Degree granted Ed.D., Date 1955, No. of pages in report 101

Granted by University of Missouri (Name if institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the educational needs of prospective home owners in the state of Washington concerning the problems involved in selecting, purchasing, constructing, and maintaining and repairing a house.

Source of Data and Method of Study:

Data were obtained via printed information forms from 424 home owners and 76 specialists in the state of Washington. The specialist group was composed of architects, real estate dealers, and building contractors. The data were tabulated, and the recommendations of the respondents are presented in the form of tables.

Findings and Conclusions:

Four-fifths of both home owners and specialists indicated that it is important for prospective home owners to know how to select, purchase, plan and contract for construction, and maintain and repair a house, and 51 per cent of the home owners expressed a desire to know more concerning these items. A course of instruction in the selection, purchase, planning and contracting, and maintenance and repair of a house should be made available to interested high school students and to adults in the community, in the evenings, during the winter season, annually. The classroom teacher should have the aid of specialists in teaching all phases of home acquisition and ownership.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Vanherck (Last name), Don (First name), Vernon (Middle name)

Exact Title CONSTRUCTIONAL ACTIVITIES: THEIR STATUS AND FACTORS RELATING TO THEIR UTILIZATION BY PUBLIC ELEMENTARY SCHOOL TEACHERS OF MISSOURI.

Degree granted Ed.D., Date 1966, No. of pages in report 199

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the constructional activities used in selected elementary schools of Missouri and determine why these activities are utilized.

Source of Data and Method of Study:

Following a review of related literature, information forms were constructed and validated. These forms were then mailed to 1411 elementary teachers or administrators to determine (1) educational outcomes to which constructional activities make a contribution, (2) status of constructional activities, (3) organized procedures, and (4) facilities, equipment, and training of instructors.

Findings and Conclusions:

1. The most frequently fulfilled educational outcomes are attitudes, appreciations, creativity, reinforcement, and self-expression.

2. Professional training in this area was shown to be a worthwhile investment.

3. Eighty percent of the teachers surveyed were including constructional activities in their pupils' educational experiences.

4. A large portion of the constructional activities were conducted in the regular classroom with a limited number of tools and equipment with soft materials being most frequently utilized.

5. In view of the value placed upon workshops for the instructional activities, higher educational institutions should make an effort to provide this type of workshops.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE & AIAA - NAITTE

Author Vantrump (Last name), William (First name), Frederick (Middle name)

Exact Title Duties, Competencies and Opportunities for Trained Licensed Practical Nurses Working in the Hospitals of Missouri.

Degree Granted Ed. D. Date 1961 No. pages in report 153

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To determine the practice of Missouri hospitals in the use of trained licensed practical nurses, the competency of such nurses in the performance of their duties, and the present and future employment opportunities in the vocation.

Source of Data and Method of Research: Hospital administrators supplied data concerning hospital facilities, personnel policies, staff, and future plans. Supervisors rated the duties and competencies of their subordinates. The trained licensed practical nurses supplied personal information concerning their own employment, duties, and competency.

Findings and Conclusions: Seven hundred and twenty-three trained licensed practical nurses were identified as working in Missouri hospitals. Over 95 percent were doing bedside nursing. There was an immediate need for an additional 1,100. Trained licensed practical nurses were caring for both the mildly and critically ill patient with no apparent differentiation, as only 3 of the 50 duties showed a significant difference. Supervisors rated trained licensed practical nurses higher in competency than the nurses rated themselves. Schools of practical nursing should place greater emphasis on teaching and perfecting the more frequently performed nursing skills. Salaries throughout the State were too low to attract desirable trainees in sufficient quantities to meet employment needs.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Vasek (Last name), Richard (First name), J. (Middle name)

Exact Title A COMPARATIVE ANALYSIS OF ELECTRONIC CONTENT IN POST-HIGH SCHOOL TECHNICAL INSTITUTES AND ELECTRONICS TECHNOLOGY REQUIREMENTS OF INDUSTRY.

Degree granted Ed. D. .Date 1967 ,No. of pages in report

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to ascertain the extent to which post high school technical programs in electronics were meeting the needs of the electronics industry in Region IV (Alabama, Florida, Georgia, Mississippi, South Carolina and Tennessee) of the United States.

Source of Data and Method of Study:

A total of 223 firms who employed electronic technicians and 63 electronic instructors were asked to respond to a checklist of tasks (content) typically taught to and/or used by electronic workers. A comparison of responses were made between the two groups of respondents.

Findings and Conclusions:

The findings revealed that of the total of 435 units of content responded to by both groups, industrial electronics teachers and industrial firms agreed on the importance of about 45 percent of the content. Industrial firms indicated that teachers placed "unnecessary" emphasis on slightly better than one-half (54.7%) of the content currently being taught. It was concluded that since the types of electronic jobs and competencies ranged from relatively routine jobs to highly specialized work roles, curriculums ranging from one to three years in length could be developed to substantually reduce the "dropout" rates in post high school electronics origins and reduce the "unnecessary" emphasis on some of the content for certain types of electronic workers.

873

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Vaughn, Maurice, Stephan
(Last name) (First name) (Middle name)

Exact Title THE PREPARATION AND CERTIFICATION OF INDUSTRIAL ARTS TEACHERS IN CANADA.

Degree granted Ed. D. Date 1967 No. of pages in report 147

Granted by The University of North Dakota Grand Forks, North Dakota
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To analyze the preparation and certification of Industrial Arts teachers in Canada, and to devise a recommended program for industrial arts teacher education in Manitoba.

Source of Data and Method of Study:

Data were collected, tabulated, and analyzed from various sources, including teachers, teacher educators, and department of education officials throughout Canada by means of correspondence, consultation, and the review of pertinent documents. There was additional information obtained from a teacher-opinionnaire.

Findings and Conclusions:

1. There existed almost general agreement among the three major groups involved on the need for a basic four-year program of teacher education for both academic and industrial arts teachers.
2. There was a great deal of similarity in all the pre-service programs conducted by provincial universities for teachers, apart, that is from the area of specialty. Approximately one-third of the total time allotment of these university-centered programs was required for general education studies for teachers of general academic subjects and industrial arts alike.
3. It was noted that professional studies and skill training absorbed the majority of the required teacher preparation period.
4. The certification of teachers in Canada remains solely a prerogative of the respective provincial governments. This provision has remained relatively unchanged since the passing of the British North American Act of 1867. There is a pronounced trend in Canada to place all forms of teacher education in the hands of the provincial universities and other indications of con sultation and cooperation between governmental officials, trustee's organizations and members of the teaching profession in respect to certification and preparation.
5. A four-year teacher preparation curriculum was recommended for I.A teachers in Manitoba based upon a comparison of existing programs in Cnanda with those suggested by leading educators in the area. Overall the industrial arts programs analyzed this study, that of the province of Alberta appeared more nearly to meet the general education, the professional, and the concentration requirements of a well-balanced teacher education program.

874

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Vogel (Last name), Richard (First name), F. (Middle name)

Exact Title AN ANALYSIS OF THE COMPARATIVE EFFECTIVENESS OF COMMON METHODS USED IN TEACHING ELECTRICITY ON THE JUNIOR HIGH SCHOOL LEVEL.

Degree granted Ed. D. ,Date 1968 ,No. of pages in report

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine the comparative effectiveness of common instructional methods and techniques used by industrial arts electricity teachers in presenting selected subject matter to junior high school students.

Source of Data and Method of Study:

A total of 1290 junior high school students were taught selected units of electricity by one of twenty different teachers for the purpose of determing whether differences in achievement could be attributed to (1) teaching methods (2) teacher variables (3) instructional methods or (4) classroom procedures. The experimental design using analysis of variance techniques was employed.

Findings and Conclusions:

The findings suggested that differences in achievement of junior high school students in the area of electricity can be attributed to (a) differences among teachers (b) differences among instructional methods and (c) differences among teachers in the amount of subject matter competencies (credits) they received during college training. It was concluded that student achievement was influenced more by teaching (teacher) variables than by the other types of factors investigated in this study.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Volk, Vincent, A.
(Last name) (First name) (Middle name)

Exact Title THE STATUS OF MEN ADMITTED TO GRADUATE STUDIES ON SCHOLASTIC PROBATION AT STOUT STATE COLLEGE, 1935--1955.

Degree granted M.S, Date 1955, NO. of pages in report 107

Granted by Stout State College Menomonie, Wisconsin
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain whether probationers graduated at the same rate as did men admitted unconditionally, whether they were rated by their administrators equally successful in teaching, and whether the number of probationers admitted is increasing.

Source of data and method of study:

Data were obtained from a study of 200 men selected at random from the graduate population of Stout State College. Of this group, 100 had received Master's degrees and 100 had not. Additional data were obtained from a study of administrators' ratings of teachers with Master's degrees.

Findings and Conclusions:

Men admitted on probation to the Graduate Program did graduate, but the rate of drop-outs was greater in the probationary group than in the non-probationary group. No significant relation was found between graduate grade point average and number of drop-outs. Men admitted on probation to the Graduate Program were rated as highly on teaching factors by their administrators as were men admitted unconditionally.

876

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Wagner (Last name), Edgar (First name), Stephen (Middle name)

Exact Title AN ANALYSIS OF PURPOSES ACCEPTED BY, TEACHING TECHNIQUES USED BY, AND RESOURCES AVAILABLE TO INDUSTRIAL ARTS INSTRUCTORS IN INDIANA HIGH SCHOOLS EMPLOYING ONE INDUSTRIAL ARTS INSTRUCTOR.

Degree granted Ph. D., Date 1960, No. of pages in report 219

Granted by Purdue University (Name of Institution) Lafayette, Indiana (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine the estent to which industrial arts instructors in one instructor industrial arts departments in Indiana high schools accept the purpose of industrial arts; use the teaching techniques; and have available the essential facilities and resources which a jury of specialist indicate as a desirable criteria.

Source of data and method of study:

A check list of purposes teaching techniques, and resources were sent to 82 jurors who were either heads of or ranking professors in industrial arts departmemts in colleges and universities of the North Central Association. A second checklist was sent to 250 industrial arts instructors. Statistical techniques were [illegible] employed on those data pertaining to purposes and descriptive analysis on data pertaining to resources.

Findings and conclusions:

1. The school instruc tors used, to a relatively high degree, the teaching techniques that the jury of specialists indicated should be used.
2. The school instructors who rated high in purposes accepted tended to rate high in teaching;techniques used.
3. Schools that had one-instructor industrial arts programs did not have the given physical facilities adequately present to the extent that the jury of specialists indicated that the facilities should be present.
4. The results of linear regression statistic indicated that there was a statistically significant relationship at the .05 level of confidence between the extent to which any given purpose and teaching techniques was accepted by the school instructors and to which the jury of specialists indicated the purpose and techniques should be accepted.

877

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Wahtera, Kauko,, Alexander
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL ARTS IN MICHIGAN'S UPPER PENINSULA

Degree granted Ph. D., Date 1965, No. of pages in report 247

Granted by THE UNIVERSITY OF MICHIGAN ANN ARBOR, MICHIGAN
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

First, to investigate the status of industrial arts in the secondary schools of Michigan's Upper Peninsula; and second, to determine if several groups of persons differed significantly in their opinions on a number of industrial arts issues.

Source of Data and Method of Study:

Study gathered normative data on status of industrial arts and opinions of persons interviewed. Data secured by personal interview of all industrial arts teachers (145), a random sampling of administrators (103), secondary teachers (85) and school board members (77) from 100 school districts were included. Median and the semi-interquartile range (Q) were employed for normative data. Chi-square was used to test the significance of the difference between the observed frequency distribution and frequency distribution expected under hypothesis of independence among respondents concerning industrial arts issues.

Findings and Conclusions:

Industrial arts courses follow the traditional pattern of wood, drafting and metals. Courses offered follow no identifiable order or sequence. Enrollments generally reflect national enrollments; however, several grade levels are frequently combined into a single class to maintain class size. A minority of the Upper Peninsula of Michigan industrial arts teachers hold memberships in professional organizations related to their teaching field. Professional magazines directed specifically to the subject matter field of industrial arts are read by a minority of these teachers. Industrial arts teachers, secondary teachers, administrators and school board members differ in their expressed opinions on several industrial arts issues. The respondents differed significantly on eleven of the fifteen issues presented to them, including the issue of the functions or purposes of industrial arts.

878

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Walker (Last name), Lloyd (First name), R. (Middle name)

Exact Title RELATIVE EFFECTIVENESS OF FOUR SUPERVISORY TRAINING METHODS IN THE AUTOMOTIVE INDUSTRY.

Degree granted Ed. D., Date 1946, No. of pages in report 258

Granted by Temple University (Name of institution) Philadelphia, Pennsylvania (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

A comparison of five methods of training supervisors: (1) directed conference, (2) case study, (3) lecture and discussion, (4) symposium, (5) combination.

Source of data and method of study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wall, Gustave, S.
(Last name) (First name) (Middle name)

Exact Title DUAL PURPOSE INDUSTRIAL EDUCATION AT THE COLLEGE LEVEL.

Degree granted Ph.D., Date 1951, No. of pages in report 263

Granted by University of Minnesota (Name of institution) Minneapolis, Minnesota (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain beliefs and practices in industrial teacher education leading to justification of a curriculum providing preparation for teaching and for entrance into an industrial occupation.

Source of data and method of study:

Data were obtained from a normative survey utilizing two instruments to compile the opinions of 492 industrial teacher educators and the practices in 109 institutions located throughout the United States.

Findings and Conclusions:

Industrial arts teacher education curricula should require equal emphasis in three areas--general, professional, and shop and drawing. A curriculum providing dual prupose organization and content is desirable.

880

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Wallace (Last name), Norman (First name), E. (Middle name)

Exact Title AN ANALYSIS AND REVISION OF THE ROAD RULES' AND ROAD SIGNS' PART OF THE TEXAS OPERATOR'S LECENSE EXAMINATION.

Degree granted Ed. D., Date 1968, No. of pages in report ______

Granted by Texas A & M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purposes of this study were to statistically analyze and improve the road rules' and signs' test given as a part of the Texas operator's license examination.

Source of Data and Method of Study:

A random sample of about 1000 copies of each of five different forms of "rules" and "signs" tests were drawn from the files of the Texas Department of Public Safety. Item analysis of the tests were made and revised items and tests were developed. The validity of the revised tests was established by comparing the results to scores made by applicants taking the test for the first time.

Findings and Conclusions:

The findings indicated that while the scores on the original five forms of the tests differed significantly, the revised test produced more reliable scores than any of the previously used forms. The conclusion was made that the revised test for road rules' and road signs' was both reliable and valid and was a significant improvement over the previously used examinations.

881

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Wallis (Last name), Carl (First name), Ransom (Middle name)

Exact Title POSITIONAL AND FORM TOLERANCING: BACKGROUNG PRESENT STATUS, AND EDUCATIONAL IMPLICATIONS.

Degree granted Ed.D., Date 1969, No. of pages in report ______

Granted by Arizona State University (Name of Institution) Tempe, Arizona (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. To review and report the background of positional and form tolerancing.
2. To ascertain the present status of positional and form tolerancing in selected schools and manufacturing industries.
3. To ascertain the relative importance of instructional content items of positional and form tolerancing as viewed by drafting instructors and industrial drafting personnel.

Source of Data and Method of Study:

Data were obtained from 216 schools and 191 industrial companies located in twelve western states.

A statistical analysis was made to determine if significant differences of opinion existed between drafting instructors and industrial personnel concerning the relative importance of instructional content items of postional and form tolerancing. The items not subjected to statistical analysis were presented in descriptive form.

Findings and Conclusions:

1. A considerable amount of the body of knowledge of positional and form tolerancing was not included in the instructional program of the schools.
2. There were differences of opinion between educators and industrial personnel regarding the relative importance of instructional content items in positional and form tolerancing.
3. Positional and form tolerancing has been substantially accepted into manufacturing industries' engineering and factory procedures.
4. There exists a need for more training in positional and form tolerancing for draftsmen and drafting instructors and for future draftsmen and drafting instructors.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wallis, Donald, E.
(Last name) (First name) (Middle name)

Exact Title STATUS OF AND DIRECTION FOR INDUSTRIAL ARTS IN THE PUBLIC SCHOOLS OF MISSOURI WITH IMPLICATIONS FOR TEACHER EDUCATION.

Degree granted Ed.D., Date 1965, No. of pages in report 422

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the status of industrial arts programs and teachers in public schools with implications for teacher education at Central Missouri State College.

Source of Data and Method of Study:

Data were obtained from records of Missouri State Department of Education and information forms from 633 Missouri secondary teachers. A jury of 54 industrial arts educators rated desirable programs while subject specialists rated instructional units.

Findings and Conclusions:

1. Industrial arts programs vary widely in Missouri schools.
2. The general shop is not fully utilized.
3. Course content varies widely.
4. Community and school support is good.
5. Central Missouri State College plays a major role in Missouri industrial arts teacher education.
6. Missouri schools need more adequate and better balanced industrial arts programs.
7. Central Missouri State College need to add some mechanics, crafts, machine metals, and architectural drawing to prepare teachers for desirable programs.

883

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Walls, W., Dale
(Last name) (First name) (Middle name)

Exact Title PROBLEMS AND PREPARATION: ANTICIPATION VERSUS EXPERIENCE

Degree granted Ed. D Date 1964 No. of pages in report 227

Granted by Wayne State University Detroit, Michigan
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To review the problems of the first year industrial arts teachers in Michigan in respect to proparatory programs, inservice assignments, and anticipated and experienced problem severity.

Source of Data and Method of Study:

An instrument was devised containing 51 selected problem descriptions arranged under six major categories. A statewide sample was queried twice: once as seniors in industrial arts teacher education, and one year later as first-year industrial arts teachers. They were asked to identify problems, which thoy anticipated and/or experienced, the seriousness of the problems, and the degree to which their undergraduate programs prepared them to cope with them.

Findings and Conclusions:

The problems anticipated by graduating seniors are similar in nature to problems experienced by first-year teachers. However, first-year teachers considered the problems to be more serious than graduating seniors had anticipated that they would be.

Existing preparatory programs appear to be providing adequate "problem orientation" for graduating seniors.

884

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE -- NAITTE

Author Walsh (Last name), John (First name), Patrick (Middle name)

Exact Title Qualifications, Preparation, and Competencies of Trade and Industrial Teachers.

Degree Granted Ed. D. Date 1958 No. pages in report 468

Granted By The George Washington University (Name of Institution) Washington, D. C. (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To examine critically existing requirements for the certification of trade and industrial teachers and all elements of the existing program for their training. To identify, define, and evaluate the functions and competencies considered necessary for successful trade teaching. To provide or identify ways and means of achieving teacher training curriculum revision to develop the necessary levels of competence.

Source of Data and Method of Research: Committee discussions and conferences, national association reviews, staff conferences, interviews, jury validation techniques, questionnaire utilization, analysis of legal documents, and a national conference for the purpose of summarizing and analyzing the findings of the study. Respondents to the several questionnaire phases of the study included a sample of successful teachers, local administrators, and supervisors of trade and industrial subjects, and the population of State supervisors and teacher trainers of trade and industrial education.

Findings and Conclusions: The analysis of State certification requirements fo trade and industrial teachers indicated that extremely wide variations occur across the Nation in established minimum requirements for such certification categories as basic education, trade experience, and professional education. Trade experience requirements, while showing less variation than professional education requirements, are not clearly defined in any of the States. It was indicated that certification standards should be determined through a systematic analysis of competencies needed by trade and industrial teachers.

There were three basic organizational plans for the preparation of teachers of trade and industrial subjects, namely: (1) Designation of a colleg or university as a State teacher training institution, (2) appointment of a State teacher training staff, (3) assumption of the function of teacher training by the State supervisory staff for trade and industrial education.

Recommendations: In the light of the increasing mobility of trade and industrial teachers, consideration must be given to the development of common patterns in teacher preparation and certification in order to bring about reciprocity of certification among the several States. An effective program for the training of trade and industrial teachers should provide for the necessary elements of general education, specialized professional education, and teaching field preparation, coupled with direct professionalized experience to develop the competencies listed.

885

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wardwell, Wayne, D.
(Last name) (First name) (Middle name)

Exact Title AN EDUCATIONAL PROGRAM FOR TECHNICAL HIGH SCHOOLS IN INDIA

Degree granted Ph.D., Date 1950, No. of pages in report 358

Granted by Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C ( )

Purpose of Study:

To plan a program of education which is possible of education and which will help individuals to be ready for the changes that must come about as India becomes an industrial nation.

Source of data and method of study:

A study of education as it has been carried on in the past and is being done at the present. The needs, interests and desires of individuals, the needs and problems of the country, the trends of the times and the resources of the country were studied. On the basis of the needs of the students and people and the means available, a plan of technical education is presented.

Findings and Conclusions:

To implement the program which has been proposed the following recommendations were offered: central and provincial boards of education should provide leadership; private enterprise should assist financially; variations in programs should be encouraged; model schools established; fees and grants-in-aid should support schools until tax support is practical; competent teachers should be employed, assisted by apprentice teachers; in-service teacher education services developed; facilities carefully selected; total program to include technical and academic opportunities; modern teaching aids employed; guidance services established; adult education provided; literacy teams organized; information concerning population control included in physiology and hygiene classes in the adult program.

886

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wargo (Last name), William (First name), Dean (Middle name)

Exact Title ATTITUDE ORIENTATIONS TOWARD ACHIEVEMENT OF STUDENTS PREPARING TO BE INDUSTRIAL ARTS TEACHERS.

Degree granted Ed.D., Date 1968, No. of pages in report ___

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The purposes of this study were: (1) to examine attitude orientations toward achievement of students who are preparing to be industrial arts teachers and analyze how these attitudes were related to class level, ACT composite scores, grade point average, professional memberships, and experience; and (2) to investigate if these variables will predict grade point averages of future students.

Source of Data and Method of Study:

An instrument for testing attitude orientations toward achievement, consisting of six scales (1. effort vs. luck, 2. future vs. present, 3. man vs. nature, 4. achievement through effort, 5. control vs. acceptance, and 6. effort vs. ability) was administered to 124 undergraduate industrial arts students at the University of Maryland during the spring semester, 1968. The data were used to test six hypotheses.

Findings and Conclusions:

1. Attitudes of industrial arts students who had high grade point averages were more significantly oriented toward effort than luck compared with students who had low grade point averages.

2. Attitudes of industrial arts students who had one or more years experience before entering college were more significantly oriented toward luck, control than acceptance, and effort than ability compared to students who lacked this experience.

3. An equation for predicting grade point average using the variables mentioned previously was determined.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Weber, Earl, M.
(Last name) (First name) (Middle name)

Exact Title A COMPARATIVE STUDY OF INDUSTRIAL TECHNOLOGY PROGRAMS IN AMERICAN COLLEGES AND UNIVERSITIES, WITH INDUSTRIAL ARTS TEACHER EDUCATION AND TECHNICAL INSTITUTE PROGRAMS.

Degree granted Ed. D., Date 1961 No. of pages in report 220

Granted by The Pennsylvania State University University Park, Pennsylvania
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine what four-year programs of industrial technology are, what their purposes are, and in what manner they differ from other programs of industrial or technical education.

Source of Data and Method of Study:

Data were secured from two sources: a questionnaire survey of all institutions involved, and a study of college catalogues supplied by these same institutions. The various programs are compared in four different categories: purposes, staff qualifications, curriculum requirements, and student enrollments.

Findings and Conclusions:

The results of the study indicate that industrial technology may be defined as an educational program designed to give the student an insight into how goods are produced, a knowledge of the problems of management and destribution, and the ethical foundation for making decisions.

Industrial technology programs have the following characteristics:
(1) purposes are management oriented rather than engineering oriented,
(2) curriculums are broad and general in nature rather than specialized,
(3) a variety of courses in laboratories or shops is required, and
(4) requirements for graduation are similar to other four-year college programs.

The purposes of industrial technology programs that are significantly different from industrial arts education and technical insititue training are concerned with the preparation of students for positions of leadership in the manufacturing industries (i.e. management positions). The comparison of curriculums shows that industrial technology differs chiefly from industrial arts education in three areas: commerce, general education, and science.

The percentage of graduates of industrial arts education that enters the teaching profession is similar whether or not a program of industrial technology is offered at the same institution.

888

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Weir, Thomas, Stephan
(Last name) (First name) (Middle name)

Exact Title A GRAPHIC ARTS PROGRAM IN THE COLLEGIATE LEVEL.

Degree granted Ed. D., Date 1955, No. of pages in report 157

Granted by Oregon State College Corvallis, Oregon
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain content areas in graphic arts for the technical preparation of industrial arts teachers.

Source of data and method of study:

Data were secured from state guides, catalogs, college programs, and a questionnaire survey of 201 educators and industry representatives.

Findings and Conclusions:

Graphic arts course content should be broadened to include many areas that are not now included. Primary emphasis should be placed on such aspects as planning, design and color, functional English, and broad understandings of graphic reproduction processes, with skill training integrated. Courses should be taught in a general setting rather than as parts of the whole.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Welsh (Last Name), Donald (First Name), J. (Middle Name)

Exact Title An Analysis of Input and Output of Vocational Education in Missouri in Relation to Manpower Needs.

Degree Granted Ed. D. Date _____ No. pages in report _____

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: The primary purpose of this study was to ascertain and compare input--expenditure and enrollment-- and output--graduates, placement, and job success-- of vocational education in Missouri in relation to the manpower needs of the state.

Source of Data and Method of Research: Factual data concerning expenditure, enrollment, and placement of the vocational graduates in the state were secured from the 1966-67 records and statistical reports on file at the Missouri State Department of Education at Jefferson City. Data on job success were obtained from past research of vocational graduates in the state.

Findings and Conclusions: (1) There is a serious imbalance between funds expended for vocational education and the man-power needs of the state. (2) The state is a defaulting partner in financing vocational education in Missouri. (3) A greater percentage of secondary students should be directed toward vocational training. (4) Missouri vocational educators are not giving proper emphasis to the training of males who will ultimately become the primary wage earners in most families. (5) The schools of Missouri are not programing secondary youth for available jobs in a realistic manner.

890

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Wentz (Last name), Charles (First name), H. (Middle name)

Exact Title A STUDY OF INDUSTRIAL ARTS ACTIVITIES FOR EDUCABLE MENTALLY RETARDED JUNIOR HIGH SCHOOL YOUTH WITH IMPLICATIONS FOR GUIDELINES IN SPECIAL INDUSTRIAL ARTS ACTIVITIES .

Degree granted ______ Date August, 1969 No. of pages in report ______

Granted by Texas A&M University (Name of institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To compare present practices of industrial arts teachers in programs for educable mentally retarded (EMR) youth with those of special education teachers who teach some phase of industrial arts. Secondary purposes of the research were to (1) compare the experience and training backgrounds of the teachers, (2) determine tools and equipment currently used in these programs, and (3) develop a guide in industrial arts activities for teachers in these programs.

Source of Data and Method of Study:

The data were collected by means of a survey which was conducted during the school year 1968-69. An information form was developed with the assistance of a jury of teachers and administrators who were working closely with EMR youth. The form consisted of selected activities, tools and equipment, and discussion topics which were relative to the following areas of industrial arts: crafts, metalworking, woodworking, drafting, electricity, graphic arts, and power mechanics. The form was submitted to 146 selected industrial arts and special education teachers from 145 school districts throughout Texas. A total of 67.8 percent of the forms were returned and 57.8 percent were usable for the study. From the data collected, a guide was developed. The contents of the guide included suggested activities, tools, and equipment, and discussion topics which were being employed in the programs which were surveyed.

Findings and Conclusions:

1. The statistical analysis of the data did not permit a general rejection of the null hypothesis that there is no significant difference between the two types of teachers in regards to activities, tools and equipment, and discussion topics employed in their programs.
2. The teachers were in agreement that the itemized activities should be included in programs for EMR junior high school youth.
3. The teachers did not differ according to their highest degree earned.
4. Fewer industrial arts teachers than special education teachers had received some type of training related to the teaching of industrial arts to the mentally retarded.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author White, Alvin, M.
(Last name) (First name) (Middle name)

Exact Title Vocational Education Needs of the People of Dent County, Missouri.

Degree Granted Ed. D. Date 1958 No. pages in report 116

Granted By University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the vocational education needs of the people who reside in Dent County, Missouri, and also of those who leave the county.

Source of Data and Method of Research: Information forms sent to 650 former students who either graduated or dropped out of Salem High School during the school years 1945-46 to 1954-55. Simple statistical procedures were used in the study.

Findings and Conclusions: A large majority of the former students had left Dent County in search of jobs. The former students who lived in Dent County had taken less education than the ones who had left. Eighty-one percent of the former students who had taken vocational agriculture in Salem High School were working outside the occupation for which they were trained. The former students were in favor of teaching vocational education classes on the high school level. There was a need for a trades and industries program in Salem High School. Better vocational guidance was needed in the selection of students for vocational training and their subsequent placement.

892

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author White, Leland, W.
(Last name) (First name) (Middle Name)

Exact Title VOCATIONAL AND TECHNICAL EDUCATIONAL NEEDS OF THE ADULT AND OUT-OF-SCHOOL YOUTH IN SOUTH DAKOTA.

Degree granted Ed. D., Date 1966, No. of pages in report ______

Granted by Texas A&M University College Station, Texas
(Name of Institution) (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purposes of this study were to determine (a) the adequacy of vocational programs in South Dakota, (b) the projected needs of industry in the State, (c) the broad areas of training which should be included in comprehensive programs and (d) a feasible plan to implement recommendations.

Source of Data and Method of Study:

Both primary sources and secondary sources of information were used to collect the data for this study. Official records, and census data were obtained, analyzed, and used to access employment needs and patterns for the State. A survey of the 1965 vocational education facilities was conducted to obtain information on the adequacy of the current program offerings and to identify projected training needs and program development.

Findings and Conclusions:

As a result of the analysis of the types of data gathered, the following conclusions were made: (1) six area vocational schools should be established to serve the needs of the students both in the district and also from outside the district, (2) a State Director of Vocational Education should be employed and cooperatively direct vocational training programs with the State Board of Vocational Education. (3) secondary schools should be enc ouraged to establish broad industrial arts programs, but should be discouraged from offering trade and technical classes unless a quality program can be maintained and (4) the need for skilled manpower will almost triple between the years 1965 and 1970.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Whitesel (Last name), John (First name), A. (Middle name)

Exact Title INDUSTRIAL ARTS LEADERSHIP PROGRAMS IN THE STATES.

Degree granted Ph. D., **Date** 1940, **No. of pages in report** 250

Granted by Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where available: **Microfilm ( )** **Microfiche ( )** **E.R.I.C. ( )**

Purpose of Study:

1. Present a philosophical structure of industrial arts.
2. Develop principles to serve as a guide in the development of state associational programs.
3. Discover the current policies, practices, and achievements of state associations.
4. Evaluate the industrial arts programs in different states.

Source of Data and Method of Study:

The source of data were obtained from the different industrial arts state associations. The techniques used in the study were: a philosophical study, a survey of interviews, correspondence, and inquiry forms, a jury study, and an evaluation.

Findings and conclusions:

The first purpose of any program should be to stimulate a widespread interest on the part of teachers, administrators, and laymen in the constructive development of industrial arts education in their state. A sound financial base could be provided by annual dues, subsidies and support by state departments and charging for commercial exhibits and advertising space at conventions. A set of 95 principles for the guidance of state associations were developed and submitted to a professional jury of twenty seven experienced state industrial arts leaders from over the nation for their critical study and reaction.

894

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wiehe (Last name), Theodore (First name), E. (Middle name)

Exact Title A FOLLOW-UP OF ENGINEERING DROP-OUTS, UNIVERSITY OF MISSOURI, 1947--1952 .

Degree granted Ed.D. Date 1954 No. of pages in report 131

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To make available information concerning the educational and occupational activities of the engineering drop-outs of the University of Missouri prior to, during, and after attendance in the College of Engineering, to learn the reason why students drop out, and to secure opinions and suggestions for improvement of the program.

Source of data and method of study:

Data were obtained from records in the Engineering Dean's office, office of the Director of Admissions, and from information forms checked by 425 of 1478 drop-outs of the College of Engineering. The data were analyzed for number and percentage of response to each item. Correlation techniques were used.

Findings and Conclusions:

No correlation was found to exist when the number of semesters completed and grade point average earned in engineering were each compared to percentile rank in high school, size of high school graduating class, intelligence scores, and wages earned per week after dropping out. The most frequent reason for dropping out was "discouragement due to low grades." Drop-outs lacked proper guidance and preparation for engineering. Many students drop out even though successful in the Engineering College. Many want practical engineering problems earlier in their engineering training. There is a tendency for drop-outs to go into semi-professional industrial jobs. Many drop-outs would like opportunity to enroll in two-year or semi-professional courses of a technical nature.

895

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Wigen (Last name), Ray (First name), Arthur (Middle name)

Exact Title Technical Offerings for Industrial Arts Teachers at the Graduate Level.

Degree Granted Ph. D. Date 1957 No. pages in report 172

Granted By University of Minnesota (Name of Institution) Minneapolis, Minn. (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the nature of technical offerings to determine a legitimate and essential basis for the inclusion of technical offerings in the preparation of industrial arts teachers, and to prepare a guide for administrators and others interested in technical offerings for industrial arts teacher education at the master's degree level.

Source of Data and Method of Research: The literature was surveyed to obtain the data to characterize the specific nature of technical work at the graduate level. The general theories of technical work at the graduate level were characterized in terms of expected behavior patterns and learning experiences. These items were prepared in form of a survey instrument for evaluative purposes. The items were evaluated by experienced men in the field of graduate industrial education. As a result of this procedure a guide was prepared for developing or evaluating technical offerings at the graduate level.

Findings and Conclusions: A guide was developed for developing or evaluating technical offerings at the graduate level for the preparation of industrial arts teachers. Comments by respondents who used the guide for evaluating technical courses indicated that the guide was effective.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wightwick, Beatrice, Frances
(Last name) (First name) (Middle name)

Exact Title THE EFFECT OF RETESTING ON THE PREDICTIVE POWER OF APTITUDE TESTS.

Degree granted Ph.D., Date 1949, No. of pages in report 205

Granted by New York University New York, New York
(Name of institution) (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To determine effect of retesting on the predictive power of aptitude tests.

Source of Data and Method of Study:

A series of aptitude tests were given to 218 boys and girls, tested repetitively; tests given 5 times at weekly intervals.

Findings and Conclusions

Increases in scores were consistent Learning did take place during process of retesting. Pupils tended to retain their relative rankings on all of the tests.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wilber, George, O.
(Last name) (First name) (Middle name)

Exact Title EVALUATION IN INDUSTRIAL ARTS TEACHER EDUCATION: A PLANNING STUDY TO DEVELOP A COMPREHENSIVE PROGRAM OF APPRAISAL IN THE UPPER DIVISION OF AN INSTITUTION ENGAGED IN THE PREPARATION OF INDUSTRIAL ARTS TEACHERS.

Degree granted Ph. D., Date 1941, No. of pages in report 470

Granted by Ohio State University Columbus, Ohio
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To study ways and means by which plans for a comprehensive evaluation of industrial arts teacher education programs may be developed and matured.

Source of data and method of study:

The data were collected from the faculty and students of Oswego State College by utilizing group discussion, individual conferences, observational reports, tests, anecdotal reocrds, check lists, and samples of work. A questionnaire developed at Ohio State University to evaluate methods of instruction was used.

Findings and Conclusions:

1. Evaluation should become a part of every course.
2. All courses should place greater emphasis upon self evaluation by students.
3. The seeming lack of instruction directed toward critical thinking is serious.
4. There appears to be an inability to apply subject matter to practical situations.
5. It is recommended that steps be taken to strengthen the present courses in English and Social Studies.
6. The informational side of industrial arts subject matter appears to be neglected.

895

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wilbur (Last name), Louise (First name), (Middle name)

Exact Title VOCATIONS OF THE VISUALLY HANDICAPPED: A STUDY OF THE NEED OF VOCATIONAL GUIDANCE IN RESIDENTIAL SCHOOLS FOR BLIND.

Degree granted Ed.D., Date 1931, No. of pages in report 398

Granted by University of California (Name of institution) Berkeley, California (City, State)

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

A study of the vocational opportunities of the blind and partially blind, with implications for guidance of the blind. The training of the blind from earliest history to the present, and opportunities for training, and employment are reviewed.

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Wilcox (Last name), T. (First name), Glade (Middle name)

Exact Title Development of Criteria for the Evaluation of Local Programs of Trade and Industrial Education.

Degree Granted Ed. D. Date 1957 No. pages in report 236

Granted By University of Indiana Bloomington, Indiana

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To provide criteria appropriate for use in the evaluation of local programs of trade and industrial education.

Source of Data and Method of Research: The initial data were selected from literature containing authoritative statements of labor, management, and education concerning positions taken with reference to vocational-industrial education. From this population distinctive statements were developed. The criteria were then developed by placing the distinctive statements in groups of like concept and phrasing each of the concepts as a positive statement.

Findings and Conclusions: Fifty-six of the 60 criteria that were developed were found to be significant. Of these 56 acceptable criteria, 41 were within a one-standard deviation significance level on an arbitrary scale, and 52 were acceptable at two sigmas. Rating scales that are currently in use include irrelevant items. Several of the older tenets of vocational education rated below what might have been expected.

900

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Williams, William. Andrew
(Last name) (First name) (Middle name)

Exact Title Present Status and Preferred Practices in Safety Education in Pennsylvania Vocational Industrial School Shops.

Degree Granted Ed. D. Date 1959 No. pages in report 168

Granted By University of Pittsburgh Pittsburgh, Pennsylvania
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To determine the present status and preferred practices of safety education in Pennsylvania vocational industrial school shops with implications for teacher education.

Source of Data and Method of Research: A checklist of 181 shop safety practices, classified under 9 headings was submitted to all vocational industrial shop teachers and administrators in Pennsylvania, as well as to a jury of experts from 12 States. Rank orders were established for the safety practices and correlation techniques employed for comparing the preferences of the three groups of respondents.

Findings and Conclusions: The study revealed that there are many safety practices which Pennsylvania vocational industrial shop teachers and local administrators agree on as desirable practices to employ in shop safety programs. Of the 181 practices submitted on the checklist, 221 shop teachers rated 167 items as preferred practices, while the 64 local administrators rated 164 items as preferred practices. There was also a high degree of correlation in the opinions of the local administrators, the shop teachers, and the jury of experts with regard to the rank order of importance of the 181 safety practices. The study also revealed that there was a high degree of relationship between preferred practices and actual practices in some instances; however, many actual safety practices lagged considerably behind the preferences of shop teachers.

901

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Williamson, Merrill, D.
(Last name) (First name) (Middle name)

Exact Title Status and Trends of Adult Education in the Public Schools of Missouri.

Degree Granted Ed. D. Date 1958 No. pages in report 256

Granted By University of Missouri Columbia, Missouri
(Name of Institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Source of Data and Method of Research: (1) Records and reports of the Missouri State Department of Education and (2) information forms sent to: students enrolled in adult courses in vocational agriculture, homemaking, distributive education, industrial education, and general adult education in selected public schools in Missouri; administrators in public schools having adult education programs; administrators in public schools having limited or no adult education programs; and lay leaders in communities having limited or no adult education programs.

Findings and Conclusions: Administrative practices in adult education in the public schools of Missouri vary considerably within certain well-established limits. Enrollment in reimbursable adult education has remained relatively constant during the past 5 years while enrollment in nonreimbursable adult education has increased 18 percent. Problems faced by public school administrators in developing adult education programs vary in degree rather than in kind. Although the educational needs of adults among the various communities are similar, many of the smaller communities have neither the financial resources nor a sufficient demand for adult education to make it feasible to offer adult education in areas other than vocational agriculture. Adult students, lay leaders, and public school administrators tend to favor the use of State funds and to oppose the use of local tax funds for the support of adult education; they are most favorable to the use of Federal, State, and local funds in combination with student fees. The instruction adult students are receiving is generally good and is meeting their needs to a high degree.

902

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wills, Vernon, Leslie
(Last name) (First name) (Middle name)

Exact Title EFFECT OF TEACHING PROCEDURES EMPHASIZING SPEED OF PERFORMANCE UPON EDUCATIONAL ACHIEVEMENT: AN EXPERIMENTAL INVESTIGATION.

Degree granted Ed. D., Date 1965, No. of pages in report 208

Granted by University of Missouri Columbia, Missouri
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine the effects of speed-up teaching on the outcomes of shop experience.

Source of Data and Method of Study:

Two groups consisting of four classes each. An experimental factor was varied while other factors were controlled.

Findings and Conclusions:

The use of comprehensive film slides appeared to be more effective than conventional chalkboard demonstrations in teaching engineering drawing. When related to ability to visualize, quantity of work completed, student attitude and instructional time. There appeared to be no difference in the quality of work. The experimental group completed more projects than the control group.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wilmott (Last name), John (First name), Nelson (Middle name)

Exact Title HIGH SCHOOL BOYS ELECTING INDUSTRIAL ARTS; A STUDY OF CERTAIN FACTORS DIFFERENTIATING THE INDUSTRIAL ARTS GROUP FROM THE GROUP NOT ELECTING INDUSTRIAL ARTS, NEW YORK.

Degree granted Ph.D., Date 1941, No. of pages in report 71

Granted by Columbia University (Name of institution) New York, New York (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Prrpose of Study:

A comparative study to determine the extent and type of certain differences that may exist between the two groups, and to point out their implications for school administrators, curriculum committees, industrial arts teachers, and supervisors.

Source of data and method of study:

Findings and Conclusions:

904

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wilson, Wade, ____
(Last name) (First name) (Middle name)

Exact Title SELECTED RECOMMENDATIONS FOR INDUSTRIAL ARTS EDUCATION: A STUDY BASED ON THE EXPRESSED OCCUPATIONAL EXPERIENCES AND NEEDS OF THE GRADUATES OF THE STATE TEACHERS COLLEGES IN THE COMMONWEALTH OF PENNSYLVANIA.

Degree granted Ed.D., Date 1954, No. of pages in report 272

Granted by New York University. Washington Square, New York
(Name of institution) (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the adequacy of the preparation of the graduates as reflected in curriculum content, the ability of the graduates to recognize and solve the problems of youth, the recognition of and the selection of objectives for the program, and recommendations for an improved program.

Source of data and method of study:

Data were secured through a questionnaire which was supplemented by visitations and interviews. The study was limited to the graduates of the industrial arts curriculum as offered in three of the state teachers colleges in Pennsylvania.

Findings and Conclusions:

The responses suggested fourteen recommendations essential to a revitalized program of industrial arts education in Pennsylvania. These recommendations indicated the need for a broader industrial arts program on the secondery level, the use of community resources, the services of a functional placement service, the importance of summer work experiences for student and faculty personnel, means for the enrichment of the student teaching program, a critical re-examination of the objectives, and the need for adequate funds for the program.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Windle (Last name), Jim (First name), L. (Middle name)

Exact Title THE EMPLOYMENT SELECTION PROCESS: A COMPARATIVE ANALYSIS OF TWO METHODS FOR REPORTING ACADEMIC PERFORMANCE DATA.

Degree granted Ph. D., Date 1968, No. of pages of repor 10

Granted by Purdue University (Name of institution) Lafayette, Indiana (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop an alternative method, from the conventional method, for reporting academic performance data on the College Interview Form to have a significantly greater probability of receiving FC* and a VC* than seniors who provide only GPA and CR data.

Source of Data and Method of Study:

The alternative method used consisted of courses grouped into four categories: majors, supporting courses for the major, minor, and electives. The employer population contained 79 employers established on the basis of recruitment behavior. The student population consisted of 2,110 interviews with the 79 employers, Group 1 (comparison) used the conventional method. Group 2 (experimental) used the alternative method.

Findings and Conclusions:

The statistical analysis of the data led to the following conclusions:
1. Reporting more extensive academic performance data on the College Interview Form is more effective for engineering majors than non-engineering majors who are located in the lower 50 percent of the senior calss and who interview employers who are definitely concerned about high grades.
2. Reporting more extensive academic performance data on the College Interview Form does not affect the recruitment behavior of employers who are not definitely concerned about lhigh grades.
3. There is no advantage to reporting more extensive academic performance data on the College Interview Form for engineering or non-engineering majors who are located in the top 50 percent of the senior class.

The reseacher concludes:
1. Providing employers with more extensive academic performance data on the College Interview Form enables them to make better hiring and placement dedisio
2. Reporting more extensive academic performance data on the College Interview Form is recognized by students as being advantageous.

* FC - further employment considerations
VO - facility visit offers

906

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Wockenfuss (Last name), William (First name), Arthur (Middle name)

Exact Title Sociological Bases of Industrial Arts for Secondary Schools.

Degree Granted Ed. D. Date 1960 No. pages in report 480

Granted By University of Florida (Name of Institution) Gainesville, Florida (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To propose a conceptual basis for developing an industrial arts program. The major hypothesis: bases of the industrial arts program are sociological rather than narrowly technological.

Source of Data and Method of Research: Data were gathered through an analysis of major authoritative writings on demography, social morphology, social processes, social institutions, and social change. Significant facts were drawn from major writings and applied to industrial arts education. Implications were syntehsized into guiding principles for the development of an industrial arts program consonant with the sociological bases upon which it must rest.

Findings and Conclusions: As a field of specialization, industrial arts must continue the study of tools, materials, processes, and products of industry. In addition, it must help students to understand (1) industry as a social institution; (2) the occupations of industry; (3) health and safety practices of industry; and (4) industrial labor relations.

907

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Wolansky, William, D.
(Last name) (First name) (Middle name)

Exact Title AN IDENTIFICATION OF FLUID POWER INSTRUCTIONAL GOALS AND CONTENT FOR INDUSTRIAL EDUCATION TEACHER PREPARATION.

Degree granted Ed. D. Date 1968 No. of pages in report 318

Granted by Wayne State University Detroit, Michigan
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the appropriate goals, identify the technical content, and develop suggested course outlines for the industrial education teacher preparation concerned with teacher competence in fluid power instruction.

Source of Data and Method of Study:

The three tasks were done with the assistance of knowledgeable representatives from industry and education. An eight member jury reviewed and made suggestions to the researcher for his consideration in the refinement of the derived instructional goals. 24 fluid power specialists reviewed the identified framework and content during a workshop and made their recommendations for the researcher's consideration.

Findings and Conclusions:

1. In curriculum development of an emerging technology such as fluid power, encouragement needs to be given to genuine participation by representatives of industry and education in the goal-making process.
2. When developing technical courses for a new or rapidly changing technology for teacher preparation, it is essential to seek the support of the educational community and of the industrial community served.
3. Faced with the problem of preapring industrial education teachers in the emerging technology of fluid power, representatives from industry and education were cooperative and very helpful in making constructive suggestions and judgments as to what should constitute the necessary educational program' for industrial education teachers.
4. The curriculum procedures developed and used in this study offer promise for organizing and infusing other new and evolving technologies into industrial education teacher preparation.
5. While the procedures used in this study were time consuming, the method employed was systematic, and thorough results were achieved in structuring course outlines designed to develop technical competencies.
6. Within the limitations of this study, the course outlines developed, constitute a proposed program in fluid power instruction for undergraduate industrial teacher education preparation.
7. This proposed program should be implemented, field tested, and evaluated. Results of experimental use, changing emphasis in teacher education, and new developments in fluid power technology should further improve the program.

908

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Wold (Last name), Kenneth (First name), Manvil (Middle name)

Exact Title Practices Employed in Selecting Students for Technical Curricula and Their Relation to the Student Completion Rate.

Degree Granted Ed. D. Date 1961 No. pages in report 270

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain practices employed in selecting students for technical (engineering-related) curricula in institutions which offer technical programs and the relation of these practices to the student completion rate.

Source of Data and Method of Resource: Data were obtained from information forms completed by 129 public and 40 private school representatives. The Chi-Square test was used for the statistical treatment of data.

Findings and Conclusions: Entrance into technical curricula in most schools was to be based on one or several of the following requirements: high school graduation or its equivalent; average high school grades; and prerequisite courses in English, algebra, and plane geometry.

There was no statistically significant relationship between student completion rate in technical curricula and the following: entrance requirements, selection methods and devices, type of school control, and whether or not the school was accredited by the Engineering Council for Professional Development.

Applicants generally attracted to technical curricula were below the caliber capable of completing such curricular successfully. Applicants were not well oriented regarding their personal qualifications and the qualifications required for entrance into technical curricula.

M

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Wooden, Ralph, Lee
(Last name) (First name) (Middle name)

Exact Title Industrial Arts in the Public Secondary School Program for Negroes in North Carolina.

Degree Granted Ph. D. Date 1956 No. pages in report 192

Granted By The Ohio State University Columbus, Ohio
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To ascertain the status of industrial arts in the public secondary school programs for Negroes in North Carolina, and to develop a program in the light of acceptable criteria. An ultimate objective is to make recommendations for the improvement of industrial arts for Negroes in North Carolina.

Source of Data and Method of Research: The need for industrial arts in North Carolina was ascertained from the State education commission and a survey of research. Standards for industrial arts programs were obtained from 12 State departments of education.

A criterion for evaluating the industrial arts program of the public secondary schools in North Carolina was derived and schools were evaluated.

Findings and Conclusions: Industrial arts should be provided on the elementary, secondary, college, and adult level. All boys and girls should be encouraged to elect industrial arts. The curriculum should include drawing, manufacturing, construction, power and transportation, management and services. Advisory committees with representatives from education, industry, and government should be appointed to help plan and develop the program. Students should receive instruction in labor, management, and employment with stress on consumer literacy and use of leisure time. Teacher education programs should provide preparatory and in-service experiences for teachers paralleling the type of program required in North Carolina.

910

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Woody (Last name), Earl (First name), Thelmer (Jr.) (Middle name)

Exact Title Analysis of the Perceived Objectives Among Industrial Arts Teachers.

Degree granted Ed.D. Date 1963 No. of pages in report 153

Granted by Colorado State College (Name of institution) Greeley, Colorado (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. (x)

Purpose of Study:

To determine the degree of unity with regard to objectives among industrial arts teachers in Oklahoma colleges and public schools. The sortings of the industrial arts teachers in Oklahoma were studied for areas of agreement and disagreement by grouping into the following categories: (1) years of teaching experience, (2) Oklahoma college industrial arts graduates, (3) Oklahoma college industrial arts teachers, (4) professional preparation, and (5) the grade level(s) of industrial arts teaching assignment.

Source of Data and Method of Study:

The population of this study consisted of 336 of the 530 industrial arts teachers in the public schools of Oklahoma, twenty-seven of the forty industrial arts teachers in the colleges of Oklahoma, and thirty selected prominent persons who responded to the Q-Sort.

The Q-Sort instrument consisted of fifty-four statements of behavioral changes selected from the American Vocational Association publication, A Guide to Improving Instruction in Industrial Arts.

Findings and Conclusions:

In comparing the rank order of objectives of the prominent persons with the Oklahoma industrial arts teachers (college and public), the three groups gave identical rankings for two objectives: Objective VII, "Habits of Orderly Performance," in first priority, Objective III, "Self-Realization and Initiative" in eighth priority. The Oklahoma industrial arts teachers (college and public) gave an identical rank to Objective II, "Appreciation and Use," as fourth priority. The prominent persons and the Oklahoma industrial arts teachers (public) gave an identical rank to Objective IX, "Skills and Knowledge," as second priority. The prominent persons and the Oklahoma college industrial arts teachers ranked Objective I, "Interest in Industry," as fifth priority while the Oklahoma public school industrial arts teachers ranked Objective I in last priority. The prominent persons ranked Objective VI, "Interest in Achievement," as last priority and the Oklahoma college industrial arts teachers gave Objective IV, "Cooperative Attitudes," the ranking of last priority.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE & AIAA - NAITTE

Author Wooldridge (Last name), Robert (First name), Elmo (Middle name)

Exact Title Employment Opportunities and Training Needs for Technicians in the State of Washington with Projections to 1970.

Degree Granted Ed. D. Date 1961 No. pages in report 116

Granted By University of Missouri (Name of Institution) Columbia, Missouri (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To compare the probable supply of, and demand for, technicians in the State of Washington from 1960 to 1970, and to interpret the implications of these findings for vocational-technical education.

Source of Data and Method of Research: Data were obtained from publications of various agencies of the governments of the United States and the State of Washington. The employment opportunities for technicians in Washington were estimated from projections of total employment.

Findings and Conclusions: The number of technicians employed in the State of Washington in 1960 was estimated at 6,873; this number is expected to increase to 13,352 in 1970. The number of employment opportunities for technicians is expected to be 7,723 during the 1960-70 decade, with the largest number expected in the manufacture of transportation equipment.

Vocational-technical schools and junior college of the State of Washington are expected to train 5,001 technicians during the 1960-70 decade. An excess of 2,726 employment opportunities over training opportunities for technicians is expected during the 1960-70 decade.

More vocational-technical training opportunities are needed for the people of the State of Washington; technicians can look forward to high levels of employment in most of the manufacturing industries; and it is apparent that technicians are playing an increasingly important role in Washington's industries.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Worthington, Kent, L.
(Last name) (First name) (Middle name)

Exact Title AN EXPERIMENTAL STUDY TO DETERMINE THE DIFFERENTIAL CONCENTRATIONS OF PARTICULATE IN THE AIR OF VENTED SCHOOL SHOPS AND UNVENTED SCHOOL SHOPS.

Degree granted Ed. D. Date 1967 No. of pages in report 82

Granted by Arizona State University Flagstaff, Arizona
(name of institution) (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the differential particulate content of air in industrial arts laboratories under two conditions; (a) with no individual machine hooding, venting or exhaust equipment; and (b) with individual machines hooded and vented, and a dust collection system in operation.

Source of Data and Method of Study:

A statistical research design was developed to test null hypotheses which compared industrial arts laboratory air under vented and unvented conditions. The "impinger sampling techniques," "the midget impinger of the Greenburg-Smith type" developed by the United States Bureau of mines were used as criterion measures to determine the concentration of dust in school shops.

Findings and Conclusions:

The first null hypothesis which compared vented school shop laboratory air to unvented school shop laboratory air was rejected. The mean concentrations of particulate from these two conditions were tested with the t-test and found to be significantly different at the .01 level of confidence.

The second research question was studied by grouping the high and low particulate concentrations from vented school shop laboratories and testing differences statistically. The t-value obtained was found to be significant at the .01 level, therefore, the null hypothesis was rejected.

Particulate concentrations from unvented school shop laboratories were grouped for the third research problem. The high concentration group from unvented facilities and the different was significant at the .01 level of confidence. The null hypothesis was untenable and was rejected.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Worthington (Last name), Robert (First name), M. (Middle name)

Exact Title Factors Affecting the Delayed Imitation of a Demonstrated Psychomotor Skill.

Degree Granted Ph. D. Date 1958 No. pages in report 167

Granted By University of Minnesota (Name of Institution) Minneapolis, Minnesota (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To test experimentally certain factors affecting learning from a demonstration.

Source of Data and Method of Research: The experimental task consisted of five polygons of birchwood, 3/4 in. thick. When assembled each formed a square of 8 x 8 inches. There were 14 experimental treatments in the design; 7 used a simple assembly task and 7 used a complex assembly task. Relative complexity of the tasks was determined by a pilot study. Subjects having a demonstration were compared with those having no demonstration.

Findings and Conclusions: The demonstration reduced the time required to learn the assembly task by delayed imitation. This reduction in time was statistically significant. The demonstration reduced the time required to learn the complex task to a much greater degree than the time required to learn the simple task.

Verbalization of key elements accompanying the demonstration did not significantly reduce the time required to learn either the simple or the complex task. Level of delay did not significantly affect the time required to learn these assembly tasks.

The lack of significant correlation between time scores and control variables indicated that the demonstration equalized the effects of IQ, chronological age, and mechanical ability.

913

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wren, (Last name), Harold (First name), A. (Middle name)

Exact Title VOCATIONAL ASPIRATION LEVELS OF ADULTS.

Degree granted Doctors, Date 1941, NO. of pages in report

Granted by Teachers College, Columbia University (Name of institution) New York, New York (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C.

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

914

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wright, (Last name), Lawrence (First name), Sydney (Middle name)

Exact Title RELATION OF UNITS TAKEN AND MARKS EARNED IN HIGH SCHOOL SUBJECTS TO NAVY SCHOOL ACHIEVEMENT.

Degree granted Ed.D., Date 1954, No. of pages in report 164

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the relation of units taken and marks earned in high school science, mathematics and industrial arts and subsequent achievement of men in the Electrician's Mates School, the Electronics Technicians School and the Machinist's Mates School, at Great Lakes, Illinois.

Source of Data and Method of Study:

Information regarding the number of units taken and marks earned in selected high school subjects by 726 navy men was obtained through an information form submitted to the principal of the last high school reportedly attended by these men. These data were then compared with the final grade earned in the navy school as reported on official graduation lists.

Findings and Conclusions:

The number of units taken in high school science and industrial arts bears little, if any, relation to achievement in any of the three navy schools. However, marks earned in these high school subjects have a direct and significant relation to achievement in each of the three navy schools. While in isolated cases the number of units taken in high school subjects may be related to achievement in navy schools, in general, a more consistent relationship exists between marks earned in high school subjects and navy school achievement. The combined marks earned in high school science, mathematics, and industrial arts are more closely related to achievement in the navy schools than are the marks earned in anyone of these subjects alone. The size of the coeffieients of correlation obtained would indicate that factors other than those measured were operating as contributors to navy school achievement.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wright, Oscar, Wilde
(Last name) (First name) (Middle name)

Exact Title THE FORMULATION OF A RESOURCE UNIT OF TEACHING AIDS FOR THE INDUSTRIAL ARTS WOODWORKING SHOP ON THE HIGH SCHOOL LEVEL IN NEW YORK CITY.

Degree granted Ed. D., Date 1954, No. of pages in report 445

Granted by New York University Washington Square, New York
(Name of institution) (City, State)

Where available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop a reference book of teaching aids for the industrial arts general woodworking shop on the high school level.

Source of data and method of study:

A survey was made to determine what instructional aids were needed for the teaching of industrial arts woodworking on the high school level in N. Y. C. Guided by this survey, the investigator collected, adopted, or constructed one hundred and eighty-six teaching aids to fit the course requirements. An evaluative study was made to ascertain whether the developed teaching aids met the needs of the industrial arts teacher in the high schools of New York City. A panel of thirty teachers rated this material.

Findings and Conclusions:

The returns from the rating committee indicated that 84.2 per cent of the material was judged by agreement as from good to excellent. The document indicates a method for the development of teaching aids for other subject areas in industrial arts. The evidence derived from 246 collective evaluations of the assembled teaching aids appears to indicate that such a resource unit may contribute to the expressed needs of the New York City high school industrial arts teacher.

916

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Wright (Last name), Welcome (First name), E. (Middle name)

Exact Title EXPERIMENTAL DETERMINATION OF THE VALUE OF THE MIRROR AS AN AID IN DEMONSTRATING OPERATIONS IN INDUSTRIAL ARTS.

Degree granted Ed. D., Date 1953, No. of pages in report 150

Granted by The Pennsylvania State University (Name of institution) University Park (City, State)

Where available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain whether the use of a mirror set-up as an aid in demonstrating operations in industrial arts will enable students to apply manipulative procedures more efficiently.

Source of data and method of study:

Data were obtained through an experimental study involving equivalent groups.

Findings and Conclusions:

Analysis of class results indicates that students can see, understand, and apply the manipulative procedures of demonstrations more efficiently when a mirror arrangement is used as an aid in presenting certain demonstrations in industrial arts. There is evidence that the mirror set-up is quite valuable when presenting demonstrations that are somewhat complicated and require detailed and precise hand activity.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Yff (Last name), Joost (First name), (Middle name)

Exact Title AN INVESTIGATION OF THE EFFECTS OF RESPONSE MODE, INTELLIGENCE LEVEL, AND SEX ON LEARNING FROM PROGRAMED INSTRUCTION.

Degree granted Ph.D., Date 1965, No. of pages in report 201

Granted by University of Maryland (Name of institution) College Park, Maryland (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

The purpose of the study was to determine (1) whether differnet response modes in a programed instruction situation produced different amount of learning; and (2) whether differences in intelligence level or sex produced differences in amount of learning.

Source of Data and Method of Study:

Two identical experiments in two different schools were conducted using 112 and 120 ninth-grade students as subjects. Subjects were stratified in terms of sex and I.Q. and were assigned to four treatments. A linear program was presented to two groups, information in paragraph form to one group and the other group was the control group. After one hundred minutes each of presentation, the subjects were tested and statistically analyzed.

Findings and Conclusions:

1. The mean score of the control group was significantly lower than those of the experimental treatment groups.
2. An effect due to intelligence level significant beyond the .01 level of significance was found in the analyses of immediate post-test scores in both schools.
3. No significant effects due to sex were obtained in either school, nor were any significant interractions detected.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Yoho (Last name), Lewis (First name), Wilbur (Middle name)

Exact Title Analysis of Functions Performed in Operating a Local Program of Vocational and Practical Arts Education in Indiana.

Degree Granted Ed. D. Date 1959 No. pages in report 277

Granted By Indiana University (Name of Institution) Bloomington, Indiana (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To analyze functions performed in operating local programs of vocational and practical arts education relative to organizational structure, operational relationships, and perceived roles in crucial or potentially crucial situations.

Source of Data and Method of Research: Data were secured by interviews with all top vocational and practical arts administrators and with vocational teacher trainers in Indiana. Communities were categorized by number of vocational officials employed, comparisons were made of action, importance, personnel involved, and type of roles performed. Actions in crucial or potentially crucial situations were identified and compared with recommendations of the teacher trainers. Action profiles of various personnel were plotted.

Findings and Conclusions: Local administrators were employed 11 to 12 months per year and were working more than 48 hours per week, yet they needed more assistants. They generally reported directly to superintendents, but no consistent pattern of relationship to school principals was evident. Superintendents generally placed vocational administrators below high school principals in responsibility and authority as measured indirectly by salaries paid. Teacher-supervisor ratios were developed as a possible measure of need for supervisory assignments.

An analysis of communities by categories revealed considerable differences in importance of function and in means of performing the functions.

Corrective action for crucial or potentially crucial situations tended toward the cooperative action of all school officials and emphasized the importance of written policies, guides and standards. The teacher trainers were not consistently in agreement on action or on means employed and suggested greater cooperative participation than that revealed by practicing officials.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Youmans, (Last name), Charles (First name), Vincent (Middle name)

Exact Title THE ROLE OF THE PUBLIC SECONDARY SCHOOL IN THE GENERAL AND OCCUPATIONAL PREPARATION OF YOUTH ENTERING SKILLED AND SEMISKILLED JOBS IN THE MANUFACTURING INDUSTRIES.

Degree granted Ed.D., Date 1955, No. of pages in report 256

Granted by University of Kentucky (Name of institution) Lexington, Kentucky (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the services the public secondary school should provide for the general and occupational preparation of youth entering industry on the skilled and semiskilled levels.

Source of Data and Method of Study:

Data were obtained from a questionnaire sent to juries composed of industrial training directors, teachers of industrial education, general educators, and education and research directors of the American Federation of Labor and the Congress of Industrial Organizations.

Findings and Conclusions:

Most respondents believe that youth entering skilled occupations should have pre-employment training keyed to "job families". Youth entering semiskilled occupations should have instruction in job skills and technical information that are of general use in industry. Both general education and industrial education are essential in preparing youth for industrial type jobs. As a means of preparing youth in the skilled occupations, the day-trade school was ranked first, the cooperative plan second, and "improved apprenticeship" third. As a means of training youth in semiskilled jobs, all groups, except the training directors, ranked cooperative education first, industrial arts second, and the day-trade school third. Respondents designated the public secondary school as the best agency for coordinating the over-all training of youth for skilled and semiskilled jobs in industry.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
+ JOINT RESEARCH COMMITTEE - AIAA - ACIATE - AIAA - NAITTE

Author Young (Last name), Darius (First name), Robert (Middle name)

Exact Title THE DEVELOPMENT OF A CONSTRUCTION INDUSTRY INTEREST INVENTORY

Degree granted Ph. D., Date 1968 No. of pages in report

Granted by The Ohio State University (Name of institution) Columbus, Ohio (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The main objective of the study was to develop a construction industry interest inventory covering practices of management, of production, and of personnel within construction industry technology.

Source of Data and Method of Study:

Construction industry practices would be ranked as "most interesting" to "least interesting". Two separate pilot studies were conducted for purposes of developing and refining the final form of the interest inventory. In its final form, the interest inventory was administered at the end of the 1967-68 school to 892 junior high students who were participating in the first field study of the IACP.

Findings and Conclusions:

1. The construction industry interest inventory could be further refined by developing a large item-phrase pool, and by using higher discrimination indices to eliminate unfavorable items.
2. Additional studies could be conducted relating student's construction industry interests to social, economic, and cultural factors which might affect their interests.
3. A battery of interest inventories could be developed for industrial technology with the addition of an interest inventory covering manufacturing technology.
4. The construction industry interest inventory can be used by guidance counselors, curriculum developers, and job-place-ment advisers.

921

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Young, (Last name), Talmage (First name), Brian (Middle name)

Exact Title AN ANALYSIS OF TEXTBOOK EMPHASIS IN INDUSTRIAL ARTS EDUCATION

Degree granted Ed.D., Date 1953, No. of pages in report 260

Granted by University of Florida (Name of institution) Gainesville, Florida (City, State

Where Available: Microfilm ( ) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To ascertain the status of the industrial arts textbook and its availablility to the public schools.

Source of Data and Method of Study:

Data were taken from the 152 textbooks submitted by publishers, the U. S. Office of Publication, various periodicals and publications, and correspondence with publishers.

Findings and Conclusions:

The lack of adequate criteria for textbook content, classification, and selection presents a serious problem. To achieve an adequate coverage of all objectives, it is necessary to use two or more books in many of the subject areas. At present, the comprehensive textbook is non-esistant in many of the subject areas. In order to provide for continued growth of industrial arts, the production of textbooks should be based upon need. The quality of textbooks should be based upon need. The quality of textbooks should be improved through adequate research. Textbooks used in industrial arts classes are often written for other purposes. The production of textbooks for industrial arts use is controlled by too few individuals.

922

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Young (Last name), William (First name), H. (Middle name)

Exact Title AN EXPIRIMENTAL COMPARISON OF THE EFFECTS OF A FILM SLIDE-AUDIO TAPE AND A PRINTED BROCHURE ON FACTORS RELATED TO A CAREER IN INDUSTRIAL ARTS TEACHING.

Degree granted Ed.D. Date 1969 No. of pages in report

Granted by University of Missouri (Name of institution) Columbia, Missouri (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

1. To experimentally compare the relative effectiveness of a film slide-audio tape and a printed brochure as a means of conveying information and influencing attitudes relative to industrial arts teaching as a career choice.
2. To identify those selected concepts and factors which can be most effectively presented by film slide-audio tape or a printed brochure.

Source of Data and Method of Study:

This investigation was conducted as an experimental comparison of two methods of presenting career information relative to a career as an industrial arts teacher. The two methods used to present the career information were: Method A, a film slide-audio tape, and Method B, a printed brochure. The study was conducted during the second semester of the 1968-69 school year and involved the eleventh grade boys in six Central Missouri Public High Schools. The sequence of events involved in the experiment included: (1) a pre-test of knowledge and a pre-measure of attitude administered fifteen days prior to the experimental treatment, (2) the experimental treatment (Methods A or B), (3) a student response scale completed five days after the experimental treatment, and (4) a post-test of knowledge and post-measure of attitude administered thirty days after the experimental treatment.

Findings and Conclusions:

There was no significant difference between the effects of the two methods regarding student knowledge or attitudes. There was a significantly more favorable attitude and a significant increase in knowledge for both groups. The mean gains in knowledge and attitude of the high ability students were equal to or significantly greater than those of the low ability students.
Students exposed to career information by a film slide-audio tape or a printed brochure will be more likely to take positive action and enroll in educational programs leading to careers in industrial arts teaching.

923

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS
JOINT RESEARCH COMMITTEE - ACIATE - AIAA - NAITTE

Author Zane, Lawrence, Far Heong
(Last name) (First name) (Middle name)

Exact Title A FOLLOW-UP STUDY OF PUBLIC SECONDARY SCHOOL ACCREDITATION IN HAWAII BY THE WESTERN ASSOCIATION OF SCHOOLS AND COLLEGES.

Degree granted Ph.D., Date 1968, No. of pages in report 238

Granted by University of Maryland College Park, Maryland
(Name of institution) (City, State)

Where Available: Microfilm (X) Microfiche( ) E.R.I.C. ( )

Purpose of Study:

To analyze the recommendations made by the sixteen public secondary schools in Hawaii and to determine what action was taken and what action should be taken on those recommendations.

Source of Data and Method of Study:

Data were obtained by reviewing documents dealing with accreditation, analyzing visiting committee reports, designing questionnaire, and administering questionnaire.

Findings and Conclusions:

1. The degree of action desired by visiting committee recommendations was higher than the action taken on recommendations.
2. Follow-up recommendations were not followed as expected by experts.
3. The attitude toward accreditation was better after accreditation than before.
4. Schools in the western region are substantially increasing their use of "Procedures for Appraising the Modern High School."

924

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS/EDUCATION
JOINT RESEARCH COMMITTEE -- ACIATE - AIAA - NAITTE

Author Zankowich (Last name), Paul (First name), (Middle name)

Exact Title The Craftsmen of Colonial New York.

Degree Granted Ed. D. Date 1956 No. pages in report 609

Granted By New York University (Name of Institution) New York, N. Y. (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study: To investigate and portray the craft life of colonial New York City from the departure of the Dutch (1664) through the period of English occupation of the city and into the early days of the Federal period.

Source of Data and Method of Research: Data were obtained by the historical method, from many original sources such as the newspapers of the day, wills, letters, journals, and ledgers of the craftsmen, bills, minutes of such institutions as the Common Council, and Trinity Parish.

Findings and Conclusions: There was in colonial New York a rich and varied craft life and a developing reliance upon the American craftsmen as opposed to the importation of foreign craft products. A functional program of apprenticeship had developed, and craftsmanship had advanced to the point of producing such a figure as Duncan Phyfe and such a monument as St. Paul's Chapel. The study closes at the turn of the century with an indication that would result in a decline of craftsmanship in the years to follow.

925

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ziel (Last Name), Henry (First Name), R. (Middle Name)

Exact Title AN INVESTIGATION OF INFORMATION DISSEMINATION PRACTICES AT TWO DISPARATE COMPANIES.

Degree granted Ed. D., Date 1961 No. of pages in report 315

Granted by Wayne State University (Name of institution) Detroit, Michigan (City, State)

Where Available: Microfilm (X) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the influence of information dissemination practices within an industrial organization as management attempts to translate their messages into desired action.

Source of Data and Method of Study:

Two industrial organizations were selected: (1) a manufacturing organization and (2) a research organization. A survey instrument was designed and distributed to all levels of supervisors at each organization. A random sample of non-supervisory-nonbargaining unit employees was conducted. The chief executive at each location was interviewed to compare his appraisal of information dissemination practices with the survey responses.

Findings and Conclusions:

1. Various levels of supervision reported a dissipation of information as it progressed through the hierarchy.
2. Information describing company progress, department progress, interrelated department information, salary increases, and promotional opportunities were information areas most predominantly withheld.
3. The immediate superior was identified as the institutionally recognized authoritative source of information, and also the most predominant source of inadequate information.
4. The chief executives' appraisal of information dissemination practices were supported by his exployees but differed as to the reason for dissatisfaction with the creditability of messages as they progressed through the organization.
5. Department activity respondents identified related departments as the most predominant sources of inadequate information transmission.
6. Survey respondents considered information most meaningful when management action was consistent with the messages transmitted.
7. Supervisors expressed more concern for written messages than they did for the spoken message because actions were more likely to be consistent with the written message.
8. Survey respondents expressed an understanding of terms used but did not accept message because they were unwilling or unable to comply with the content of the message.
9. Respondents reported that conflicting management action adversely indulenced the reliability of the original message.
10. The manufacturing type activity was more reliant upon related department information (e.g., quality control, industrial relations), than the research activity.

NOTICE

THE ABSTRACTS THAT APPEAR BEHIND THIS PAGE WERE TURNED INTO THE COMMITTEE AFTER THE ORIGIONAL COMPILATION WAS UNDER PRODUCTION. THESE PAGES NEED TO BE INSERTED INTO THEIR PROPER ORDER WITHIN THE TEXT BEFORE THE DOCUMENT IS BOUND FOR USE. IN SOME INSTANCES, ONLY THE RESEARCHERS NAME, SCHOOL, YEAR, AND DISSERTATION TITLE WERE AVAILABLE AT THIS TIME. ADDITIONAL DATA WILL BE ADDED AND SENT TO EACH SUBSCRIBER AFTER THE FIRST OF EACH YEAR. BE SURE THAT ALL CORRECTIONS AND ADDITIONS TO THE RESEARCH SUMMARIES ARE TURNED INTO THE COMMITTEES BY THE FIRST OF THE YEAR IN ORDER THAT THEY MAY BE INCLUDED IN THE SUPPLEMENTAL MAILINGS.

D.L. JELDEN

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author D'Ambrosio (Last name), Vincent (First name), C. (Middle name)

Exact Title COMPARATIVE PSYCHOMOTOR ACHIVEMENTS IN TWO INDUSTRIAL ARTS COURSES.

Degree granted Ph. D., Date 1969, No. of pages in report

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available; Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Dirkson (Last name), Ralph (First name), Edward (Middle name)

Exact Title RELEVANT LEARNING FOR THE INDUSTRIAL MANUFACTURING OPERATIVE.

Degree granted Ph. D., Date 1969, No. of pages in report ____

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ehrenborg, (Last name), John (First name), David (Middle name)

Exact Title THE VALIDATION OF A DEVICE FOR IDENTIFICATION OF INDUSTRIAL ARTS TEACHING SUCCESS.

Degree granted Ed. D. Date 1963, No. of pages in report

Granted by University of California at Los Angeles (Name of Institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

930

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Genevro (Last name), George (First name), William (Middle name)

Exact Title A HISTORY OF INDUSTRIAL ARTS IN THE LONG BEACH CITY SCHOOLS.

Degree granted Ed. D., Date 1966, No. of pages in report ______

Granted by University of California (Name of Institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

931

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Hammer (Last name), Gerald (First name), K. (Middle name)

Exact Title CHARLES ALPHEUS BENNET, DEAN OF MANUAL ARTS

Degree granted Ed. D., Date 1962, No. of pages in report

Granted by University of California at Los Angeles (Name of Institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Harris (Last name), James (First name), N. (Middle name)

Exact Title PROPOSED CRITERIA FOR SELF-EVALUATION OF FOUR-YEAR INDUSTRIAL TECHNOLOGY PROGRAMS.

Degree granted Ed. D., Date 1969, No. of pages in report 251

Granted by Wayne State University (Name of Institution) Detroit, Michigan (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To formulate suggested criteria that might be used as guides in establishing and/or evaluating programs in industrial technology.

Source of Data and Method of Study:

Data obtained from (1) review of literature; (2) a survey of seventy institutions with four-year technology programs; (3) results of evaluation and selection of criteria by a panel of judges; (4) revision of the criteria.

Study procedures: (1) Reviewing the literature; (2) submitting proposed survey form to screening committee; (3) surveying the seventy institutions; (4) developing the suggested criteria and dimensions; (5) submitting suggested criteria and dimensions to a panel for their evaluation, and (6) revising the criteria.

Findings and Conclusions:

(1) More than eighty institutions have on-going four-year technology programs; (2) three-fourths of fifty-one respondents (institutions) indicated that they exercised voluntary adherence to selected standards advocated for technology education; (3) representatives at institutions indicated preference for guidelines and standards that would have national sanction and recognition; (4) fourteen suggested criteria containing specific dimensions were endorsed as appropriate for self-evaluation of four-year industrial technology programs.

933

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Jenkins (Last name), John (First name), David (Middle name)

Exact Title AN EXPERIMENT TO DETERMINE THE EFFECTIVENESS OF SLIDES AND AUDIO TAPES FOR PRESENTING MANIPULATIVE DEMONSTRATIONS IN GRAPHIC ARTS.

Degree granted Ed. D., Date 1969, No. of pages in report ______

Granted by Texas A&M University (Name of Institution) College Station, Texas (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

934

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Karr, Donald, L.
(Last name) (First name) (Middle name)

Exact Title PROBLEMS AND PERCEPTIONS OF PRACTICAL NURSING INSTRUCTORS IN RELATION TO THEIR TRADE AND INDUSTRIAL TEACHER EDUCATION PROGRAM.

Degree granted Ph. D., Date 1969, No. of pages in report

Granted by The Ohio State University Columbus, Ohio
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

935

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author McLoney (Last name), Wirt (First name), Landram (Middle name)

Exact Title CURRENT PRACTICES AND TRENDS IN INDUSTRIAL ARTS EDUCATION IN THE COMPREHENSIVE HIGH SCHOOLS OF SAN DIEGO COUNTY, CALIFORNIA.

Degree granted Ed. D. ,Date 1965 ,No. of pages in report

Granted by University of California (Name of Institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE -AIAA - ACIATE - NAITTE

Author O'Dell, (Last name), Robert (First name), Doran (Middle name)

Exact Title A STUDY OF FACTORS RELATED TO THE TRANSFER OF JUNIOR COLLEGE STUDENTS TO STATE COLLEGES PROGRAMS IN INDUSTRIAL ARTS.

Degree granted Ed.D.., Date 1963, No. of pages in report

Granted by University of California (Name of Institution) Los Angeles, Californai (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

937

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Anderson (Last name), Lowell (First name), Dean (Middle name)

Exact Title A COMPARISON OF THE PROFESSIONAL ATTITUDES OF ACTIVE INDUSTRIAL EDUCATION TEACHERS TO THOSE WHO LEAVE THE PROFESSION.

Degree granted Ph. D., Date 1969, No. of pages in report 219

Granted by Michigan State University (Name of Institution) East Lansing, Michigan (City, State)

Where Available: Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine (1) the percentage of a sample of 200 secondary industrial education teachers in Michigan who leave the profession in a given year, and (2) the differences in pretested professional attitudes between active teachers and teachers who leave the profession.

Source of Data and Method of Study;

A sample of 200 active industrial education teachers was identified by a multistage stratified random method from secondary teachers in Michigan for the academic year 1968-1969. An attitude test instrument was administered to all members of the sample. Statistical analysis was made of attitude differences between those who left and those who remained in the profession. Interviews of persons leaving the profession was done.

Findings and Conclusions:

The percentage of persons leaving the profession and persons moving from industrial education teaching but remaining in education was:

1. Five percent of the sample of 200 teachers indicated they would leave the profession that year.
2. Ten and one-half percent of the sample of 200 teachers indicated they would not teach industrial education but would remain in education.
3. The total percentage leaving the industrial education teacher role in one was 15.5 percent.

Attitudes of teachers remaining in the profession as compared to those leaving the profession were found significantly different.

Reasons for leaving the profession, identified by interviews, were (1) poor salary, (2) lack of commitment to the profession, (3) falseness of the school situation, and (4) the inadequacy of being employed for only ten months of the year.

938

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Alkan (Last name), Omer (First name), Cevat (Middle name)

Exact Title A PROPOSED COOPERATIVE VOCATIONAL EDUCATION PROGRAM FOR TRADE AND INDUSTRIAL OCCUPATIONS IN TURKEY.

Degree granted Ph. D., Date 1969, No. of pages in report

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Allen (Last name), David (First name), ________ (Middle name)

Exact Title THE HISTORY OF PROFESSIONAL INDUSTRIAL EDUCATION ORGANIZATIONS IN CALIFORNIA.

Degree granted Ed. D., Date 1962, No. of pages in report ________

Granted by University of California at Los Angeles (Name of Institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

940

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE -AIAA - ACIATE - NAITTE

Author Andreyka, Robert, E.
(Last name) (First name) (Middle name)

Exact Title A SURVEY AND ANALYSIS OF THE EDUCATIONAL TASKS OF OHIO'S POST HIGH SCHOOL TECHNICAL INSTRUCTORS: IMPLICATIONS FOR TEACHER EDUCATION.

Degree granted Ph. D. ,Date 1969 ,No. of pages in report 262

Granted by Kent State University Kent, Ohio
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To secure and analyze educational tasks as perceived by post high school technical instructors.

Source of Data and Method of Study:

A questionnaire was mailed to 530 technical instructors who were teaching in community colleges technical institutes, technical schools and university branches during the 1968-69 academic year. Chi squares were computed on each of the 21 general information items to determine any significant differences among the technology groups.

Findings and Conclusions:

Full-time instructors appraised each of the significant items higher, which suggested that part-time instructors did not perceive these tasks as important as full-time instructors. Basically, there were no differences found between these two groups in classroom tasks. These and other findings suggested that the use of part-time instructors should be kept at a minimum.

941

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ashley, Lawrence, F.
(Last name) (First name) (Middle name)

Exact Title INDUSTRIAL ARTS EDUCATION A STUDY OF PROGRAMS IN UNDERGRADUATE TEACHER EDUCATION.

Degree granted Ph. D. Date 1936 ,No. of pages in report 176

Granted by The Ohio State University Columbus, Ohio
(Name of Institution) (City, State)

Where Available Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study

To examine a large sampling of programs in Industrial Arts Education in various parts of the country to see if there is any agreement on policies relative to entrance requirements course offerings, staff and student personnel, and faculties.

Source of Data and Method of Study:

The questionnaire technique was used to survey educational institutions which offered four year programs for preparation of Industrial Arts teachers. The information gathered was supplemented by the institution's latest catalog.

Findings and Conclusions

Industrial Arts departments are composed of laboratories which offer: bench woodwork architectural drawing, advanced turning and cabinet making, machine drawing printing sheet metal work machine shop, electricity, elementary cabinet work general metal work, wood finish and general shop.

The equipment ranges in value from $2.000 to $100,000 and buildings cost from $6,500 to $200 000. Entrance into the industrial arts program are the same as required for entering college. The program leading to a baccalaureate degree varies quite widely. In some schools because of the depression the major had been dropped in favor of more minors.

942

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Asper (Last name) Norman (First name) L. (Middle name)

Exact Title THE RELATIVE CONTRIBUTIONS OF OVERT AND COVERT ACTIVITY TO THE LEARNING OF A PRAXIOLOGICAL CONCEPT.

Degree granted Ph. D. , Date 1969 No. of pages in report

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine the relative contributions of both overt and covert activity to the learning of an industrial praxiological concept.

Source of Data and Method of Study:

Five junior high school industrial arts classes were randomly assigned to five treatment groups. Each group received the same content presentation via videotape. After the presentation each group was provided varying amounts of time to conceptualize the acitivity (covert activity) and to practice the activity (overt activity).

Findings and Conclusions:

The evidence obtained from the analysis of data indicates that praxiological learning increases with an increase in the percentage of time spent in overt activity. The amount of increase, however, ceases to be significant as the percentage of time spent in overt activity approaches 80%. It can be generalized, therfore, that to obtain the highest degree of learning for this particular praxiological concept (setting the gap of a spark plug) the percentage of time that should be spent at overt activity should exceed 60%.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Babcock (Last name), James (First name), Gray (Middle name)

Exact Title AN EXPERIMENTAL STUDY TO DETERMINE THE EFFECTS THAT CREATIVE PROBLEM SOLVING SITUATIONS HAVE UPON CREATIVE THINKING ABILITY AND VISUAL THINKING ABILITY OF SELECTED STUDENTS ENROLLED IN COLLEGE DESCRIPTIVE GEOMETRY CLASSES.

Degree granted Ed. D., Date 1969, No. of pages in report 120

Granted by Utah State University (Name of Institution) Logan, Utah (City, State)

Where Available Microfilm (x) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The purpose of this study was to determine the effect of systematic instruction in applied creative problem-solving on tests designed to measure specified visual thinding abilities and designated divergent production and cognitive factors coalesced into a descriptive geometry course.

Source of Data and Method of Study:

Subjects for the experimental study were junior and senior college students that enrolled for the descriptive geometry course. The subjects were randomly assigned to an experimental group and a control group. Differences between the experimental group design and the control group design were tested by analysis of variance. Included was one trend analysis of variance. The test of significance was at the 5 percent level.

Findings and Conclusions:

It was concluded that a course in descriptive geometry, involving creative thinking, will not improve the visual thinking abilities although a clear-cut assessment could not be made. It was further concluded that the incorporation of an applied creative problem-solving unit within a descriptive geometry course will develop the creative thinking abilities of those students. It was concluded that a course in descriptive geometry, as commonly taught, would not improve one's creative thinking ability. In addition it was concluded that an educational course restrictive in procedure would hamper the full utilization of those individual abilities associated with creativity. Finally it was concluded that a course in creative thinking could be developed and successfully conducted by industrial education teachers. It was recommended that a course of creative thinking be implemented within the framework of industrial education programs including industrial teacher preparation. It was also recommended that descriptive geometry be taught to express space concepts in graphical form and to apply theory to the solution of space problems through the utilization of the creative problem-solving process. It is recommended that a study should be conducted to determine the significant differences between those individuals involved in an integrated creative problem-solving oriented descriptive geometry course and a rule-memorization oriented descriptive geometry course.

944

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Barlow, Melvin, L.
(Last name) (First name) (Middle name)

Exact Title A HISTORY OF TRADE AND INDUSTRIAL EDUCATION IN CALIFORNIA.

Degree granted Ed. D., Date 1949, No. of pages in report 373

Granted by University of California at Los Angeles Los Angeles, California
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To research the history of trade and industrial education in California.

Source of Data and Method of Study:

Original documents and primary source materials. Secondary accounts used to enhance general understanding of points in question. Historical survey method used.

Findings and Conclusions:

No findings and conclusions available in this type of study.

945

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ellenwood (Last name), Theodore (First name), Sidney (Middle name)

Exact Title A STUDY OF THE ANNA S.C. BLAKE MANUAL TRAINING SCHOOL FROM 1891 to 1909

Degree granted Ed. D., Date 1960, No. of pages in report 317

Granted by University of California at Los Angeles (Name of Institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To present an account of the Anna S.C. Blake Manual Training School in Santa Barbara from the time of its inception in 1891 until the establishment of the Santa Barbara State Normal School of Manual Arts and Home Economics in 1909.

Source of Data and Method of Study:

In order to present an account of the SAnta Barbara Sloyd School, the writer (1) searched editions of the press for the years from 1890 to 1909; (2) studied records preserved by the Santa Barbara School Board; (3) searches minutes of the State Board of Education; (4) searches editions of professional magazines published between 1890 and 1909; (5) studied records kept in the archives of the University of California, Santa Barbara; (6) searches legislative records for this era in the State Archives, Sacramento; and (7) discussed the Sloyd School with such former students as could be found. In order to preserve information, photographic copies were made of significant records. A synthesis of the work of the Sloyd School was prepared from information gathered. This synthesis was studied in order to evaluate significance of the Sloyd School.

Findings and Conclusions:

1. The school was the channel through which educational philosophy and principles asserted by Otto Salomon in Europe and Gustaf Larsson in Boston reached the West.
2. The school set educational standards for manual training in California public school during the decade of the 'nineties.
3. The school gave leadership to the general manual training movement.
4. Santa Barbara was the first California community to include manual training in public schools and to provide public support for the work.
5. The school was among the first California institutions to train public schools teachers specifically for manual training.
6. The school secured the first endorsement for special certification of qualified manual training teachers by the California State Board of Education.
7. The Santa Barbara State Normal School of Manual Arts and Home Economics which grew from the work of the Sloyd School evolved through the years to become the University of California, Santa Barbara.

946

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Davison (Last name) Harold (First name) Jerome (Middle name)

Exact Title INTEGRATION OF PRACTICAL ARTS AND VOCATIONAL EDUCATION

Degree granted Ph. D. Date 1931 No. of pages in report 202

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

This study attempts to investigate the possibility, desirability, and availability, of the establishment of the integration of Practical Arts and Vocational Education division within the State Department of Education, and to suggest organization plans.

Source of Data and Method of Study:

The data were obtained through a questionnaire, augmented by informal correspondence. State Superintendents and teachers from the various universities having departments in vocational education and practical arts were surveyed.

Findings and Conclusions:

The findings of this study indicate that a very considerable majority of the leaders participating in this study believe state integration of Practical Arts Education and Vocational Education to be desirable from an educational point of view.

It was found that three-fourths of the participants believe that the major purposes of practical arts education lead into, and integrally related to, the accepted purposes of vocational education.

These combined divisions must necessarily (because of local factors and the availability of comparative few individuals qualified to fill these newly created positions) be the result of gradual developmental growth.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Clay (Last name), Kenneth (First name), R. (Middle name)

Exact Title A STUDY OF THE NATURE OF CREATIVE BEHAVIOR IN INDUSTRIAL ARTS AND THE INDICATED ENCOURAGEMENT OF THIS TYPE OF BEHAVIOR BY MICHIGAN INDUSTRIAL ARTS TEACHERS.

Degree granted ________, Date ________, No. of pages in report _____

Granted by Michigan State University (Name of Institution) East Lansing, Michigan (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To define operationally the nautre of creative or non-creative behavior in the field of industrial arts and to determine the extent to which industrial arts teachers in Michigan indicate they encourage this thpe of behavior in their classrooms.

Source of Data and Method of Study:

Individual creative and non-creative behavioral items were developed based on a review of literature and research on creativity. Items were validated by a panel of six judges who were industrial arts educators and had written on the subject o creativity. The final inventory consisted of forth creative and twenty non-creative behavioral items agreed upon by five or all six of the judges. The inventory was administered by mail to a random sample of 297 junior or senior high school industrial arts teachers in the State of Michigan.

Findings and Conclusions:

1. Teachers who teach in multiple area laboratories indicate a greater encouragement of creative behavior and less encouragement of non-creative behavior than teachers who teach in limited area or unit shop laboratories.
2. Junior high school teachers who teach in multiple area laboratories indicate a greater encouagement of creative behavior and less encouragement of non-creative behavior than junior high school teachers who teach in limited area or unit shop laboratories.
3. Senior high school teachers who teach in limited area or unit shop laboratories indicate a greater encouragement of non-creative behavior than senior high school muliple area teachers.
4. Teachers who indicate they emphasize skill development or interpreting industry objectives of industrial arts also indicate greater encouragement of non-creative behavior than teachers who indicate they emphasize a self-realization objective of industrial arts.
5. Differences in teaching level (junior or senior high), educational experience (masters or bachelors degree) and number of years teaching experience have no effect on indicated encouragement of creative or non-creative behavior.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Callen (Last name) Louis (First name) ,J. (Middle name)

Exact Title INDUSTRIAL ARTS TEACHER EDUCATION PROGRAMS: A COMPARATIVE ANALYSIS AND EVALUATION OF SELECTED TEACHERS AND COLLEGES.

Degree granted Ph. D. ,Date 1952 ,No. of pages in report 253

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To ascertain how teachers were prepared for the teaching profession, what, and how well they are now teaching in the public schools.

Source of Data and Method of Study

Data were secured from published curricula and a questionnaire sent to selected leaders on a nationwide basis.

Findings and Conclusions

There is a very considerable lag between theory and practice. Entrance requirements. are too low, there are wide variations in requirements for the major and minor. Student teaching situation should be made more real and more emphasis should be placed on the elementary and adult education phases of the program. The teacher's college curricula should be broadened to more accurately orient teachers to technology while they are in preparation.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Brown (Last name), Milton (First name), T. (Middle name)

Exact Title OCCUPATIONAL STUDIES OF SELECTED SKILLED TRADES IN PHILADELPHIA.

Degree granted Ed. D., Date 1948, No. of pages in report ______

Granted by University of Pennsylvania (Name of Institution) Philadelphia, Pennsylvania (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The two purposes of this study were to help meet a need for additional local information about the skilled trades, and to develop a technique whereby similar studies might be prepared in this and other communities.

Source of Data and Method of Study:

Fifty trades were selected for the study. The majority represented crafts for which school or apprenticeship training was available at the time. Data for this study were drawn from printed matter such as pamphlets, magazines, books, government releases, and union-management contracts; and visits to unions, individual employers, employer organizations, and goverment agencies. A prepared questionnaire was used for the latter purpose. Whenever possible interviews were conducted over the telophone or by personal visits.

Findings and Conclusions:

It is the author's opinion that local occupational studies are necessary and feasible. Since the publication of the initial studies in this project, there has been evidence of growing local concern. Graduate students in several universities are investigating local opportunities, and the State Employment Service has published a number of occupational briefs.

Efforts of this type should be coordinated so that busy employers and union officials are not approached for the same information by different investigators. An institution in the community should be encouraged to assume responsibility for the inauguration of new studies and the revision of old ones, and to set up permanent machinery for the collection and dissemination of local occupational information. Information of this type is a vital prerequistie to better vocational counseling.

950

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Bowers (Last name), Victor (First name), Lee (Middle name)

Exact Title AMERICAN HOUSING AND INDUSTRIAL ARTS EDUCATION: A STUDY OF THE RELATIONSHIPS OF CERTAIN PRACTICES IN THE CONSTRICTION AND ALLIED INDUSTRIES TO THE PRODUCTION OF HOUSING WITH IMPLICATIONS FOR INDUSTRIAL ARTS EDUCATION.

Degree granted Ph. D. Date 1941 No. of pages in report 299

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To understand the relationship of practices in construction and the current rate and cost of house production. To quote the attempts to improve the house product. To examine housing courses now taught in the schools. To make suggestions leading to housing studies units in industrial arts.

Source of Data and Method of Study:

The source of data were general and technical housing literature in the book, magazines, pamphlets, etc. Conferences were held with public housing officials, architects builders, and educators. A number of housing study units from schools were collected.

Findings and Conclusions:

Evidence presented suggest that the housing industry operates inefficiently and that many trade and business practices are shortsighted and vicious. The attempts to improve housing was in the area of mass producing prefabricated units. The general public with its gross ignorance and lack of concern is one of the drawbacks to progress in housing. This has implication for the school to have housing study units to help young people to become more knowledgeable in this field.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Beach (Last Name) Charles (First name) Kenneth (Middle name)

Exact Title A STUDY OF CERTAIN FACTORS WHICH HAVE BEARING UPON THE PREDICTION OF SUCCESS IN SHOP COURSES IN A TECHNICAL AND INDUSTRIAL SCHOOL.

Degree granted Ph. D. , Date 1941 No. of pages in report 176

Granted by Cornell University (Name of Institution) Ithaca, New York (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

An attempt to determine some of the aptitudes, traits, or abilities that may differentiate the pupils receiving high marks from the puils receiveing low marks in courses involving mechanical abilities, in an effort to establish reliable prognostic practices regarding the admission of pupils.

Source of Data and Method of Study:

Questionnaires sent to industrial schools.

Findings and Conclusions:

1. No great differences between pupils who are successful in courses involving mechanical abilities and pupils who are not.

2. Clinical approach should be made in selection of pupils:
    - A. Review of previous school records
    - B. Intelligence tests
    - C. Interviews
    - D. Apptitude and achievement tests
    - E. Study Habits.

952

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Decker (Last name), George (First name), Clare (Middle name)

Exact Title AN INDUSTRIAL ARTS MASTER'S DEGREE PROGRAM: WITH PARTICULAR REFERENCE TO THE STATE OF NEW YORK.

Degree granted Ph. D. Date 1943, No. of pages in report 258

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To develop for industrial arts majors on the masters level a graduate program which will meet the needs of secondary school teachers of up-State New York.

Source of Data and Method of Study:

An analysis of the literature and previous studies was made in an attempt to arrive at an evaluative form for a total industrial arts graduate program on the master's level. The evaluative form was submitted to a small group of graduate school deans, also to a select group of directors of industrial arts teachers eudcation programs.

Findings and Conclusions:

Objectives for graduate study are:

1. To expand. to suppliment, and to explore new areas in industrial arts education.
2. Develop research and leadership abilities.
3. Develop new educational interests and abilities.
4. A concentrated concern on more strictly professional phases of teacher education.

There is a definite tendency to limit graduate school faculties to teachers of professional rank. The common practice is tobase admittance of industrial arts majors to graduate programs primarily of possession of an acceptable baccalaureate degree with an industrial arts major.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Cotton (Last name), George (First name). Robert (Middle name)

Exact Title COLLEGIATE TECHNICAL EDUCATION FOR NEGROES IN MISSOURI WITH PROPOSED PLANS FOR DEVELOPMENT.

Degree granted Ph. D., Date 1944, No. of pages in report 186

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available· Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

The development of a technical program for Lincoln University, the only state-supported and controlled institution for the higher education of Negroes in Missouri.

Source of Data and Method of Study:

From a review of the literature, a plan was developed based upon the needs and current trends engineering and technical education. The plan was then presented to selected faculty for review and revision.

Findings and Conclusions:

The proposed program for technical education at Lincoln University is composed of five areas: (1) industrial-arts teacher-education, (2) industrial terminal courses, (3) semi-engineering courses, (4) building engineering and (5) basic engineering. The basic and semi-engineering curriculums are to be new offerings: the industrial terminal courses will replace the industrial vocational courses; and the industrial arts teacher-education and building engineering courses are to be revised.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Chavous (Last name) Arthur (First name) , Melton (Middle name)

Exact Title INDUSTRIAL ARTS FOR NEGROES IN OHIO

Degree granted Ph. D. ,Date 1945 No. of pages in report 176

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To examine the Negro's environment in Ohio in an effort to discover and isolate factors and trends which operate to limit the extent and quality of the Negro's participation in technical and industrial employment.

Source of Data and Method of Study:

The data analyzed were: United States Census Reports, local social and industrial studies and surveys, school records and reports, unpublished theses and dissertations, interviews, questionnaires, general correspondences, etc.

Findings and Conclusions:

Racial antagonisms, minunderstandings, prejudices, and resentments constitute the greatest threat against the domoncratic way of life. Negroes are beginning to realize industry demand higher intelligence and skills. Education for occupational areas in which relatively large numbers of Negroes are employed should be stressed.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Caley, Paul, Cochran
(Last name) (First name) (Middle name)

Exact Title AN EXPERIMENTAL ANALYSIS OF THE DIFFERENTIAL EFFECTS OF LECTURE-DISCUSSION AND LABORATORY ACTIVITY ON THE MORE COMPLETE UNDERSTANDING OF TECHNOLOGICAL CONCEPTS LEARNED IN WRITTEN MATERIALS.

Degree granted Ph. D. Date 1969 , No. of pages in report

Granted by THE OHIO STATE UNIVERSITY COLUMBUS, OHIO
(Name of Institution) (City, State)

Where Available Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study·

To ascertain the value of textbook materials, non-written, verbal learning materials. and laboratory activity toward the objective of learning concepts inherent in industrial technology.

Source of Data and Method of Study·

Four groups of 26-29 eighth grade students were selected. Each group was exposed to four 30 minute text readings and workbook questions. In addition a second group was exposed to 15 minutes of lecture-demonstration, a third group to laboratory activity for 35 minutes and a fourth group to both lecture-demonstration and laboratory activity.

Findings and Conclusions·

Three conclusions were drawn concerning industrial technological concept learning with adolescent-age children. First, once a certain number of concepts are mastered from written learning materials, an additional exposure to learning modes of the lecture-discussion and laboratory activity type do not have a significant effect on the learning of additional concepts. Second, there is no substantial evidence to support the contention of superiority of lecture-discussion over laboratory activity or vice versa, nor is there an advantage in adding either or both types of activities to a school program. Third, that written learning materials are a more efficient means of learning concpets than lecture-discussion and laboratory acitivity, singly or in combination.

SOURCE SHEET FOR SUMMARIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Bowman (Last name) Ernest (First name) , Lavern (Middle name)

Exact Title CONTENT AND METHOD IN THE TEACHING OF BLUEPRINT READING FOR FIVE SELECTED BUILDING TRADES.

Degree granted Ph. D. Date 1932 No. of pages in report 281

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To investigate the present status of policies and practices in the teaching of plan reading. To develop text material from the investigation.

Source of Data and Method of Study:

The data were obtained from an inventory checklist of the practices of teaching plan reading in five trades (carpentry, bricklaying, electrical wiring, plumbing, steamfitting) in the United States. A jury, drawn from the designated trades, was consulted as to the importance of these practices in blue print reading in each of the trades.

Findings and Conclusions:

1. The subject of blue print reading is of vital importance.
2. Methods and material must have direct practical application.
3. Some practices are common to all trades.
4. Certain learning experiences are of high value to a single trade.
5. There can be a basic course in blue print reading.
6. Elements can be defined and should be evaluated by a jury of experts.
7. Objectives of course should be well defined.

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Bollinger (Last name) Elroy (First name) William (Middle name)

Exact Title PRINCIPLES FOR THE CONSTRUCTION OF VOCATIONAL HIGH SCHOOL BUILDINGS.

Degree granted Ph. D. Date 1950 ,No. of pages in report 377

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

To determine trends from current practices in vocational building construction and the writings of informed persons from which a set of principles may be devised to guide in the design and planning and construction of vocational school housing.

Source of Data and Method of Study:

The source of data were obtained from a bibliographical study of written material, a pilot study to determine what information and data should be obtained and an indepth study of eight selected vocational school buildings. The research technique that were employed were- the integrative technique; the interpretive technique; and the investigative technique.

Findings and Conclusions:

1. Vocational education has been accepted by educators and the public as an essential and integral part of public education.
2. Vocational education should serve both as training for employment and contribute substantially to the general education of the individual.
3. There is a trend in general secondary education to emphasize vocational preparation.
4. Vocational schools are recognizing the need of concerning themselves with the entire individual as well as skill and technical knowledge.
5. The planning of vocational high school is similar in most respects to regular general secondary high schools.
6. Vocational school buildings are tending to fewer floors and spreading out over more ground.
7. There is a definite shifting of occupational training to the senior levels of high school and in post high school years.
8. There is a growing dissatisfaction with the restrictive effects of present federal law subsidizing vocational education.

958

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Bates (Last name) William (First name) M., (Middle name)

Exact Title A STUDY OF THE NDEA INSTITUTE CREATIVITY IN INDUSTRIAL ARTS.

Degree granted Ph. D. Date 1969 No. of pages in report ____

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study

This study was conducted to determine the effectiveness of the NDEA Institute, Creativity in Industrial Arts, conducted at Kent State University, Kent, Ohio, from June 19 to July 21, 1967.

Source of Data and Method of Study:

The study was descriptive-survey in nature. The data were sought in three areas: (1) a summary evaluation of the institute, utilizing an instrument developed by the U.S.O.E., (2) evaluation of specific objective as were states in the Plan of Operation for the institute (3) ascertaining the effect of the institute on teaching and classroom practices.

Findings and Conclusions:

In final analysis, and in consideration of the accumulation of positive data through the questionnaires, the review of literature, and in conclusion of the visitations, the writer states that there has been a decided impact resulting from the N.D.E.A. Institute. Creativy in Industrial Arts: however, it is difficult to know the exact extent of this impact. On the basis of the visitations it would appear that the institute had a great impact on one-third of the participants; a moderate effect on another third. and apparently little effect on the final third.

959

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Ryan, James, Edwin
(Last name) (First name) (Middle name)

Exact Title THE HISTORY OF MANUAL TRAINING TEACHER EDUCATION IN THE CALIFORNIA STATE NORMAL SCHOOLS.

Degree granted Ed. D., Date 1964, No. of pages in report ________

Granted by University of California Los Angeles, California
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

960

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Thomas (Last name), Kenneth (First name), Russel (Middle name)

Exact Title A HISTORY OF INDUSTRIAL ARTS IN THE CITY OF PASADENA

Degree granted Ed. D., Date 1967, No. of pages

Granted by University of California (Name of Institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

961

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Valentine, Ivan, E.
(Last name) (First name) (Middle name)

Exact Title AN ASSESSMENT OF THE TWO-YEAR SERIES OF NATIONAL LEADERSHIP INSTITUTES IN TECHNICAL EDUCATION.

Degree granted Ph. D., Date 1969, No. of pages in report ____

Granted by THE OHIO STATE UNIVERSITY Columbus, Ohio
(Name of Institution) (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions:

962

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Watkins (Last name), Kenneth (First name), Eugene (Middle name)

Exact Title A CRITICAL STUDY OF TURNOVER AMONG INDUSTRIAL EDUCATION TEACHERS.

Degree granted Ed. D., Date 1966, No. of pages in report ____

Granted by University of California (Name of Institution) Los Angeles, California (City, State)

Where Available Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study·

Source of Data and Method of Study:

Findings and Conclusions:

963

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author West (Last name), William (First name), E. (Middle name)

Exact Title THE INFLUENCE OF THE INDUSTRIAL ARTS CURRICULUM PROJECTS MATERIALS ON THE OCCUPATIONAL CHOICES OF 8th GRADE MALE STUDENTS.

Degree granted Ph. D., Date 1969, No. of Pages in report ____

Granted by The Ohio State University (Name of Institution) Columbus, Ohio (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions

964

SOURCE SHEET FOR SUMMARIES OF STUDIES IN INDUSTRIAL ARTS EDUCATION
JOINT RESEARCH COMMITTEE - AIAA - ACIATE - NAITTE

Author Zullinger (Last name), John (First name), (Middle name)

Exact Title INDUSTRIAL EDUCATION'S IMAGE: AN ANALYSIS OF SELECTED COMMUNITY LEADERS ATTITUDES.

Degree granted Ed. D., Date 1966, No. of pages in report

Granted by University of California (Name of Institution) Los Angeles, California (City, State)

Where Available: Microfilm ( ) Microfiche ( ) E.R.I.C. ( )

Purpose of Study:

Source of Data and Method of Study:

Findings and Conclusions: